New Ways of Working & Human Resource Management:

Conceptual and empirical investigations on the role of HRM in enabling flexible responses to a dynamic environment

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STATUS OF THE MANUSCRIPTS

This table presents the status of the manuscripts that form the basis of this dissertation. The points are calculated based on the German VHB 2024 ranking. As illustrated in the table, with 3.88 points gained, the required 2.5 points according to ESCP regulations for cumulative dissertation have been achieved.

Title	**Authors**	**Status**	**Journal**	**Ranking (VHB 2024)**	**Points**
Paving the way for progress in employee agility research: a systematic literature review and framework	Salmen, K. Festing, M.	Published	*International Journal of Human Resource Management*	A	2.00
Interorganizational collaboration in talent management: Gaining resources from talent sharing	Salmen, K. Festing, M.	Revise and resubmit	*European Management Journal*	B	1.25
		Beyond Desk Reject	*Human Resource Management*	A	-
The role of HRM in fostering an ambidextrous climate and individual ambidexterity: A paradox theory-based framework and empirical investigation	Salmen, K. Festing, M. Alfes, K. Mauer, R.	Revise and resubmit	*German Journal of Human Resource Management*	B	0.63
Total					**3.88**

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LIST OF ABBREVIATIONS

AI	artificial intelligence
CEO	chief executive officer
ChatGPT	Chatbot Generative Pre-Trained Transformer
Covid-19	coronavirus disease 2019
DOI	digital object identifier
Dr.	doctor
ed(s.)	editor(s)
EIASM	European Institute for Advanced Studies in Management
et al.	et alii (and others)
etc.	et cetera (and so on)
EU	European Union
e.g.	exempli gratia (for example)
HPWS	high performance work systems
HR	human resources
HRM	human resource management
i.e.	id est (that is)
JD-R	job demands-resources
NWW	New Ways of Working
OECD	organisation for economic co-operation and development
p. / pp.	page/s
Prof.	professor
P-E	person-environment
PwC	PricewaterhouseCoopers
SLR	systematic literature review

SPSS	Statistical Package for the Social Science
TM	talent management
UK	United Kingdom
US	United States
USA	United States of America
VHB	Verband der Hochschullehrerinnen und Hochschullehrer für Betriebswirtschaft
vs.	versus

1 INTRODUCTION

"*The greatest danger in times of turbulence is not the turbulence; it is to act with yesterday's logic*." (attributed to Peter Drucker)

Today's business environment is characterised by high degrees of dynamism resulting from various developments, including globalisation, digitalisation, demographic change and global crises (Beltrán-Martín & Roca-Puig, 2013; Bundesakademie für Sicherheitspolitik, 2023; Dyer et al., 2014; Linthorst & de Waal, 2020; Pina e Cunha & Vieira da Cunha, 2006). In order to address these developments, many organisations are transforming themselves, including their approaches to work (Alfes et al., 2022; Drazic & Schermuly, 2024; Hesselbarth et al., 2024; Linthorst & de Waal, 2020; Wilkinson & Barry, 2020). In this regard, the New Ways of Working (NWW) phenomenon, which is understood as an "ongoing transformative process, characterised by unprecedented spread, speed and depth of transformation" (Alfes et al., 2022, p. 4361), has been highly discussed by scholars and practitioners alike (Drazic & Schermuly, 2024). This transformative process shifts the way in which work is orchestrated and executed towards greater flexibility and adaptability in various areas (Alfes et al., 2022; Aroles et al., 2021; Hesselbarth et al., 2024; Spreitzer et al., 2017). For instance, today, organisations increasingly rely on new types of employment relations, including, for example, gig work, which enables them to source labour when it is required (Alfes et al., 2022; Ashford et al., 2018; Spreitzer et al., 2017). Another even more well-known example represents the phenomenon of remote work, allowing employees to be more flexible in terms of work location and schedule (Alfes et al., 2022; Demerouti et al., 2014; Spreitzer et al., 2017). Overall, NWW represent one vehicle of organisations to fit the above-mentioned environmental dynamism (Alfes et al., 2022; Hesselbarth et al., 2024). This notion is rooted in principles of the open systems perspective, outlining that organisations are connected to and moulded by their environment (Hesselbarth et al., 2024; Scott & Davis, 2006).

Human beings play a key role with regards to NWW (Alfes et al., 2022; Günther et al., 2022; Helmold, 2021; Hesselbarth et al., 2024; Schermuly, 2021). Research indicates that their behaviours, attitudes and skills can contribute to the successful implementation of

NWW (Breu et al., 2002; Helmold, 2021; Hesselbarth et al., 2024). For instance, self-responsibility, including proactivity and self-directed learning, is crucial for autonomous working and projects based on self-initiated learning (Hesselbarth et al., 2024). Furthermore, it is suggested that transformational leaders support NWW by empowering employees and thus increasing team performance (Helmold, 2021; Hesselbarth et al., 2024)

One key lever to support and develop employee characteristics is Human Resource Management (HRM) (Noe et al., 2019), and since employee characteristics seem to play an important role for NWW, HRM requires consideration in this context (Duggan et al., 2020; Günther et al., 2022; Harsch & Festing, 2020). The mission of HRM is to support work-related transformative processes via its influence over employee characteristics (Günther et al., 2022; Noe et al., 2019; Snell & Morris, 2021). However, researchers indicate that HRM itself needs to be rethought, if it is to align with this new context (Cappelli & Tavis, 2018; Festing & Schäfer, 2022; Snell & Morris, 2021). This corresponds with the HR ecosystems perspective emphasising the relevance of HRM alignment with the organisational ecosystem (Snell & Morris, 2021). Some research has already pinpointed the value of aligned practices and systems in the context of NWW (e.g., Festing & Schäfer, 2022; Günther et al., 2022; Harsch & Festing, 2020; Hölzl, 2022). While these insights represent valuable advancements for shedding light on the role of HRM in NWW-related contexts, overall, there are several limitations to this area of research. First, investigations into the role of HRM for NWW and related characteristics, to the best of the author's knowledge, are still relatively scarce in the field (Alfes et al., 2022; Salmen & Festing, 2022), with an exception of the domain of remote work (e.g., Günther et al., 2022). Second, studies related to NWW often include proxies to measure HR practices and systems, such as high-involvement (Prieto-Pastor & Martin-Perez, 2015) or motivation-enhancing (Ahammad et al., 2015) HR practices that are not aligned to the specific context. These aspects represent issues for several reasons. First, in NWW-related contexts, the current conceptualisation of HRM and the ways practices are designed is challenged (e.g., algorithmic HRM in the field of gig work (Duggan et al., 2020) and agile HR practices (Cappelli & Tavis, 2018) . However, to the best of the author's knowledge, there is scarce empirical research on novel HRM designs that are specifically aligned with the new ecosystem associated with NWW. Empirical research on novel HRM designs can create a more nuanced understanding of how organisations can adapt their HR practices and

systems and how they can contribute to NWW. Second, NWW considerably impacts the ways in which employees experience work. It has been shown that although it has a multitude of advantages, it can also come with several pitfalls (e.g., remote work has been associated with job satisfaction and lower work-family conflict, on the one hand, but also with isolation, overworking, blurred work-life boundaries, technostress and presenteeism, on the other hand (Charalampous et al., 2019; Gajendran & Harrison, 2007; Kunze & Zimmermann, 2022; Tarafdar et al., 2007)). For agile teams, higher levels of psychological empowerment and peer pressure have been reported (Khanagha et al., 2022; Malik et al., 2021) (further details can be found in Chapter 2.1.4)). HR has the power to provide important resources to employees, which can counterbalance these effects (Günther et al., 2022; Harsch & Festing, 2020; Schaufeli, 2017) and help individuals and organisations to benefit from the potential inherent in NWW. Third, in line with the HR ecosystems perspective, HRM requires alignment with the organisational ecosystem (Snell & Morris, 2021). Therefore, considering NWW and related characteristics, HRM needs to address its specificities. Taking these aspects into account, this doctoral dissertation is organised around a central research question which forms the primary focus of this work:

How can HRM influence NWW in a dynamic environment?

Two subordinate research questions seek to delve deeper into the role of employee characteristics in this regard and thus allow for an encompassing investigation of the central research question.

1. *How can HRM influence employee characteristics (i.e., individual agility, individual boundary spanning roles and individual ambidexterity)?*
2. *How can employee characteristics (i.e., individual agility, individual boundary spanning roles and individual ambidexterity) contribute to NWW?*

The three manuscripts that build the basis of this doctoral dissertation focus on the first subordinate research question, thereby covering the influence of HRM on specific employee characteristics (i.e., individual agility, individual boundary spanning and individual ambidexterity) that are relevant in dynamic environments (Breu et al., 2002; Good & Michel, 2013; Harsch & Festing, 2020; Salmen & Festing, 2022). These characteristics consist of elements including, for example, flexibility, adaptability,

innovation and learning, which are paramount in meeting changing requirements in the context of work and the overall organisation (Breu et al., 2002; Festing & Schäfer, 2022; Harsch & Festing, 2020; O'Reilly & Tushman, 2008; Salmen & Festing, 2022). Although the authors of the manuscripts do not explicitly focus on the role of employee characteristics for NWW in the individual manuscripts, there are initial indications in the investigations and in further research that these employee characteristics are among the ones – as outlined above – that are related to NWW (Breu et al., 2002; Hesselbarth et al., 2024). For example, Breu et al. (2002) found that an agile workforce is associated with new working approaches, including remote work and virtual collaboration. Furthermore, a recent contribution found that boundary spanning and collaboration, albeit on a structural dimension of work, are key features of NWW (Hesselbarth et al., 2024).

To answer the second subordinate research question, this work moves beyond the particular focus on HRM and individual characteristics as covered in the three manuscripts. As such, it further synthesises and analyses in how far employee characteristics can contribute to the transformation towards NWW. In addition, it also highlights in which way NWW can be a vehicle to aligning with the dynamic environment. Subsequently, the results of the analyses are translated into a framework.

All of these manuscripts already make their respective contributions. In addition, some overall contributions are provided. First, through its investigation into three employee characteristics (i.e., individual agility, individual boundary spanning and individual ambidexterity), as well as related HRM practices and systems, this research creates deep insights into these phenomena and HR-related antecedents. Second, by drawing on the HR ecosystems perspective (Snell & Morris, 2021), this work explicitly takes a process perspective on HRM by investigating systems and practices that are aligned to the requirements of a specific ecosystem. This approach stands in contrast to former research in this field, which often applied proxies (e.g., Prieto-Pastor & Martin-Perez, 2015). Third, this work suggests a comprehensive framework, not only outlining how HRM via employee characteristics contributes to NWW, but also suggesting how NWW helps organisations to be adaptable and flexible in a dynamic environment. In line with Hesselbarth et al. (2024), the arguments herein are substantiated based on open systems. Thus, this work takes over a relatively novel theoretical lens on HRM, employee

characteristics and NWW. Furthermore, through this contribution, it moves beyond the findings of the individual manuscripts. Fourth, the author also delivers a comprehensive synthesis of the status quo of the NWW research field, which helps to recognise research gaps and develop an encompassing future research agenda.

The structure is organised as follows. After this introduction, Chapter 2 provides a comprehensive overview of NWW. Here, the status quo of the NWW research field is outlined with a view to creating a profound understanding of the phenomenon. First, the focus falls on novelty of work, the roots of the phenomenon, its definition and the key areas undergoing transformation. In addition, the chapter summarises what is currently known about its positive and negative consequences. Second, the dynamic environment, characterised by various megatrends and one disruptor, is discussed as the key driver of NWW. Third, it focuses on HRM, presenting an overall understanding of it and the specific role it plays in relation to NWW. Chapter 3 presents the three manuscripts that form the basis of this doctoral dissertation and focuses on the research objectives, the research methods and the underlying research paradigms that guided the research process. Chapter 4 then introduces the three manuscripts. In Chapter 5, the key findings of the manuscripts are presented, a framework is developed (covering NWW and the role of HRM and employee characteristics in a dynamic environment) and contributions, limitations, future research avenues and practical implications are outlined. Lastly, in Chapter 6, a brief conclusion is provided.

2 NEW WAYS OF WORKING IN A DYNAMIC ENVIRONMENT

In this section, an in-depth understanding of the term NWW is initially provided. Therefore, the differences between the new and the old worlds of work are summarised, a definition is provided, key areas of work undergoing transformation are detailed and positive and negative aspects of the phenomenon are considered. Second, it presents external drivers and disruptors triggering the transformation towards NWW. Third, it highlights the role of HRM in settings affected by NWW, and fourth, it provides a summary of the literature review.

2.1 Understanding New Ways of Working

2.1.1 The traditional and new world of work

When discussing work in this research, it is generally referred to as economic work, which is broadly understood as an "activity undertaken for another party in exchange for compensation" (Cappelli & Keller, 2013, p. 577). This broad understanding of work allows room for variation; indeed, over the course of time, one can observe that the understanding of work has been subject to many changes, depending on various aspects, including, for instance, the current zeitgeist and macroeconomic developments (Schermuly, 2021). As also outlined by Drazic and Schermuly (2024), more traditional conceptualisations understand work as "jobs where work is performed on a fixed schedule – usually full-time – at the firm's place of business under the firm's control and with mutual expectation of continued employment" (Kalleberg et al., 2000, p. 257). This view highlights the notion that traditional work is characterised by "static, rule-based, and inflexible structures" (Hesselbarth et al., 2024, p. 967) and dates back to the Industrial Revolution when peasants became production workers in factories (Drazic & Schermuly, 2024). With this development, people shifted from autonomous working to collaboration within strict hierarchies and under significant control, from flexible schedules to fixed working days, from more holistic production processes with a variety of tasks to the division of labour with repetitive tasks (also known as Taylorism) (Drazic & Schermuly, 2024; Kaur et al., 2010; Schermuly, 2021).

In the last decades, several external developments have taken place that have increased – and continue to increase – the amplitude of dynamism in the environment (Beltrán-Martín & Roca-Puig, 2013; Bundesakademie für Sicherheitspolitik, 2023; Dyer et al., 2014; Linthorst & de Waal, 2020; Pina e Cunha & Vieira da Cunha, 2006). Consequently, many organisations have moved away from a traditional view of work and reconsidered their approaches (Alfes et al., 2022; Aroles et al., 2021; Demerouti et al., 2014; Schermuly, 2021; Spreitzer et al., 2017). In this context, one has witnessed a transformation towards increased flexibility and adaptability in the way work is organised and performed in recent years, and these developments oftentimes are associated with NWW (Alfes et al., 2022; Aroles et al., 2021; Demerouti et al., 2014; Drazic & Schermuly, 2024; Gerards et al.,

2018; Spreitzer et al., 2017). While the term ‘New Ways of Working’ represents only one title for the phenomenon, others include ‘New Work’ (e.g., Helmold, 2021), ‘Future of Work’(e.g., Balliester & Elsheikhi, 2018), ‘Modern Work’ (e.g., Drazic & Schermuly, 2024), ‘New World of Work’ (e.g., Spreitzer et al., 2017) or ‘Alternative Work Arrangements’ (e.g., Spreitzer et al., 2017). Inherent to all these terms is the notion that something about work is ‘new’ (Alfes et al., 2022), and they hint that a clear difference between a traditional and a novel approach to work exists (Alfes et al., 2022; Aroles et al., 2021). Aroles et al. (2021, p. 2) even summarise that “‘new’ in NWW […] stands for something truly and qualitatively different, the changes in work practices that are revolutionary and paradigmatic instead of evolutionary and partial.” Certain practices associated with NWW, however, are not entirely new but have already existed before, albeit these were not widely represented in the world of work and were rather experimental in character (Aroles et al., 2021). Remote work as a prominent example of a practice associated with NWW existed in the 1980s; however, at that time, only 1% of the population in the USA worked remotely (Monte et al., 2023). Furthermore, one could argue – as also highlighted above – that the world of work has always been subject to change, which is also discussed by Alfes et al. (2022), who outline the existence of book titles stemming from the 1980s and reflecting the ever-changing nature of work. Another example is “The transformation of work in the electronic age” (Strassmann, 1985), a book rooted in the 1980s, Howeverhat is different today is the “spread, speed, and depth” (Alfes et al., 2022, p. 4363) with which changes occur in the workplace. This especially refers to the share of employees impacted by change, the pace with which change takes place and with which new aspects become normal, as well as how strongly these changes influence employees and the workplace (Alfes et al., 2022).

After having delineated the difference between the traditional and the new world of work, this section looks at the origins of NWW, which can be found in the work of social philosopher Fithjof Bergmann. The aim is to pinpoint which aspects of the original understanding of NWW still exist and what has changed since then.

Bergmann coined the term ‘New Work’ in the 1980s and called for a fundamental redesign of the employment system, which at that time was highly dominated by the capitalist idea of wage labour, involving severe pitfalls such as exploitation and

inequalities (Bergmann, 2004) . At the heart of his ideas was that work should serve humans, and it should be energising and an opportunity for self-development instead of being an energy drain (Bergmann, 2004). As he concluded, people should be self-determined at – and experience purpose in – their work. In this regard, he pointed to the importance of work being something that humans "really, really want"[1] (Bergmann, 2004, p. 323). This could be achieved by reducing paid employment and self-sufficiency enabled by technology (Bergmann, 2004; Helmold, 2021). His conviction was that in this context people would not only feel happier, but they would also show greater creativity and inventiveness, in turn serving society (Bergmann, 2004).

Today's research on NWW still draws on Bergmann's original ideas to some extent. On the one hand, it highlights the need to restructure the world of work. On the other hand, it partly considers that work serves humans by centring on human-related factors such as autonomy, self-fulfilment, work-life balance, meaningfulness, purpose and empowerment (see, for example, Demerouti et al., 2014; Schermuly, 2021; Spreitzer et al., 2017).

Today, however, the practical and scholarly debate has moved away from his ideas, especially those on the abolishment of the wage labour system and the implementation of practices ensuring self-sufficiency (Schermuly & Meifert, 2022).

2.1.2 Definition of New Ways of Working

Up to this point, it has been revealed that NWW is a transformative process in the world of work. The initial ideas on this subject stem from Frithjof Bergmann's reflections on human-centred work developed in the 1980s, but how is the NWW concept understood today?

Providing an answer to this question represents a considerable challenge for scholars and practitioners alike. Despite the increasing attention and importance of the research field, there is no consensus on the definition of NWW and associated practices (Hesselbarth et al., 2024; Renard et al., 2021). This is highlighted also by Hesselbarth et al. (2024), outlining that NWW represents "an umbrella term covering a range of possible

[1] The original quote is in German and has been translated from German to English; original quote: „wirklich, wirklich wollen" (Bergmann, 2004, p. 323)

work approaches" (p. 965), whilst the research field is coined by "widely scattered knowledge" (p. 965). In line with this notion, (Schermuly, 2021, p. 12) articulates that it is "a trending topic and at the same time a confusing conglomeration of different measures and principles […]"[2]. Currently, one can find a variety of NWW definitions in the literature. For instance, Demerouti et al. (2014) as well as Kotera and Vione (2020) focus in their definitions on flexibility in relation to work location and timing. Drazic and Schermuly (2024) add another dimension to this understanding, namely the flexibilisation with which individuals work together. While the aforementioned authors made valuable contributions and helped advance understanding of NWW, their definitions only include a limited number of areas undergoing change, and they describe the changes as being rather static instead of continuous.

In line with a recent study on the topic (Hesselbarth et al., 2024), this doctoral dissertation adopts a process perspective on NWW and defines the phenomenon as "as an ongoing transformative process, characterized by unprecedented spread, speed and depth of transformation [including] […] four major changes in work which impact employee`s experiences" (Alfes et al., 2022, p. 4361). These four major changes are to be found in different key areas of work, (i.e., "work space and time", "work relations", "content of work", and "allocation and organization of work") (Alfes et al., 2022, p. 4363). Alfes et al. (2022) compiled these insights in a framework (see Figure 1).

2.1.3 Key areas of transformation in the world of work

This section will focus in more depth on the four major key areas of work undergoing transformations which are based on a framework developed by Alfes et al. (2022) (see Figure 1). Common to these transformations is the notion of flexibility and adaptability (Alfes et al., 2022). For each key area this work identifies exemplary forms of NWW which are mainly based on Alfes et al. (2022). The different key areas are not completely clear-cut, as they are also interrelated. For example, new and augmented employee roles (dimension: "content of work" (Alfes et al., 2022, p. 4363)) often go hand in hand with new ways to distribute work (dimension: "allocation and organization of work" (Alfes et

[2] The original quote is in German and has been translated from German to English; original quote: „New Work ist ein Trendthema und gleichzeitig ein unübersichtliches Sammelsurium verschiedener Maßnahmen und Prinzipien" (Schermuly, 2021, p. 12).

al., 2022, p. 4363)). This framework and its key areas make a valuable contribution to the further understanding of NWW, and as such the current doctoral dissertation will draw on them.

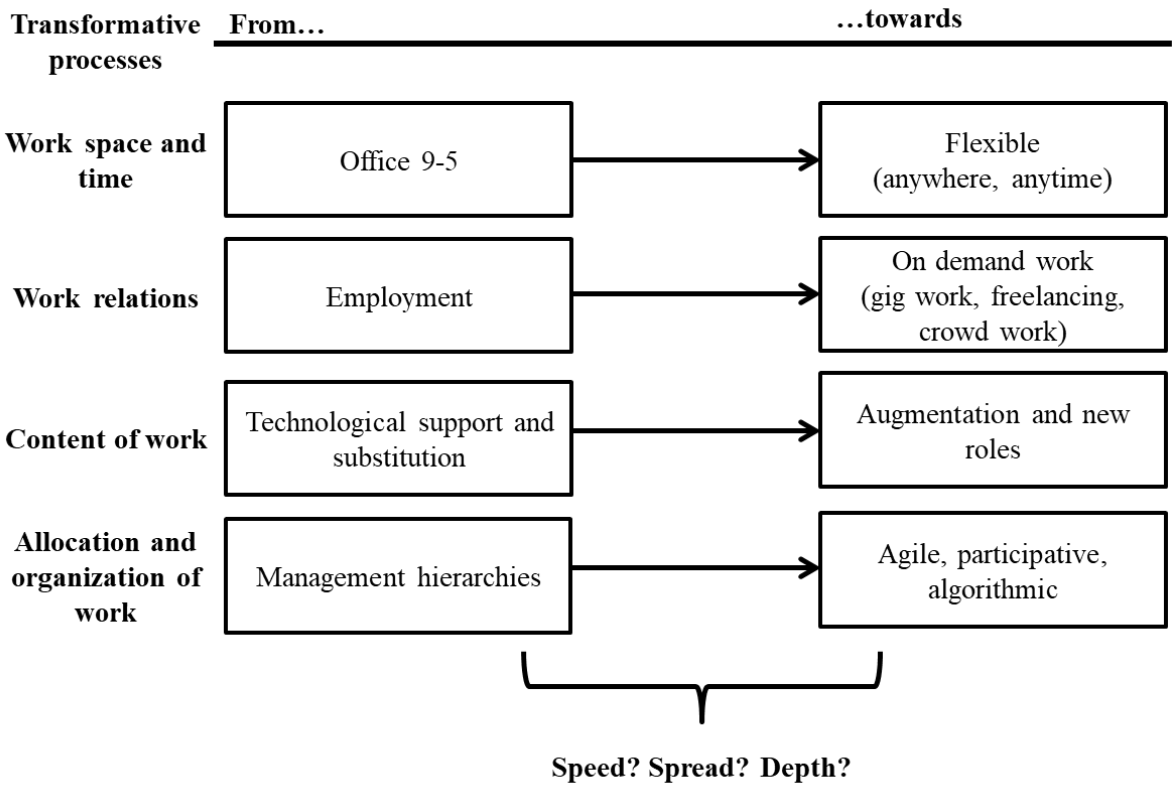

Figure 1: Framework outlining four key areas of work undergoing transformations (Source: Alfes et al., 2022, p. 4363)

2.1.3.1 Work space and time

The availability of mobile devices, collaborative software and cloud services results in an increased flexibility in working location and time (Alfes et al., 2022; Schermuly, 2021). In former times, employees tended to work in offices that were run by their employer with rather fixed schedule or core working hours, usually somewhere between 9 and 5. Nowadays, people are more flexible and given more autonomy concerning where and when they do their work (Alfes et al., 2022; Demerouti et al., 2014; Spreitzer et al., 2017). Today, one can witness many work settings where employees (1) (at least partially) work remotely from locations of their choice, such as co-working spaces, home or private

offices, and (2) decide when they want to work (Alfes et al., 2022; Demerouti et al., 2014; Gajendran & Harrison, 2007; Spreitzer et al., 2017). Thus, virtual teams, understood "as groups of geographically, organizationally, and/or time dispersed workers brought together by information and telecommunication technologies to accomplish one or more organizational tasks" (Powell et al., 2004, p. 7) , gain importance (Hesselbarth et al., 2024; Kirton, 2020; Schermuly, 2021; Zimmermann, 2019). When discussing remote work, different types of employees can be distinguished: some work entirely in an alternative location other than the organisation's office (fully remote work format), and others spend some working days in the location operated by their employer (hybrid work format) (Gajendran & Harrison, 2007; Gratton, 2021). While in 2008 only around 8% of employees in the European Union (EU) worked remotely to some extent, this figure increased to 22% and accounted for 41.7 million people in 2021 (Eurofound, 2022). These developments can be traced back mainly to the coronavirus (Covid-19) pandemic (Eurofound, 2022). However, a recent study in the US context has shown that the number of days spent in the office is still 30% below pre-pandemic levels, with hybrid work being the dominant work format (McKinsey, 2023a). Here, especially highly skilled employees with high housing costs work less frequently in the office (McKinsey, 2023a). All in all, the study concludes that hybrid work is not a temporary phenomenon but "hybrid work is here to stay" (McKinsey, 2023a).

2.1.3.2 Work relations

While traditional work is characterised by employment relationships with one organisation exerting direct control over employees, nowadays one can spot the rise of nonstandard work relations (Alfes et al., 2022; Ashford et al., 2018; Cappelli & Keller, 2013). In this regard, tasks are carried out independently and on demand by individuals outside the organisation (Aroles et al., 2021; Ashford et al., 2018; Cappelli & Keller, 2013; Duggan et al., 2020). Types of these nonstandard work relations include gig work, which can be distinguished into capital platform work (e.g., Airbnb), crowdwork (e.g., Amazon MTurk) and app work (e.g., Uber), and other types of freelancing, like direct contract work (e.g., contracted individuals) and subcontract work (e.g., salespersons on premises) (Alfes et al., 2022; Aroles et al., 2021; Duggan et al., 2020). Statistics covering freelancers show that they are steadily growing in the US, from 53 million in 2014 to 64 million in 2023

(Statista, 2024), because organisations are increasingly resorting to this kind of nonstandard employment relationship (Ashford et al., 2018). Furthermore, for the specific case of gig workers, it has been reported that they account for 20% of all US citizens and represent the fastest-growing cohort among those with nonstandard work relations (Ashford et al., 2018; Spreitzer et al., 2017).

2.1.3.3 Content of Work

Especially due to fast technological developments, the content of work is transforming (Alfes et al., 2022; Schermuly, 2021; Wang & Siau, 2019). Technologies and machines have existed for a long time in the workplace, and in the past they have taken on a supporting function or substituted certain process steps (Alfes et al., 2022) (e.g., machine looms during the industrialisation). Today, however, the role of technology has changed considerably due to the emergence of smart machines that operate based on artificial intelligence (AI) and machine learning (Simmler & Frischknecht, 2021). On the one hand, technology and humans collaborate in a more complex, synergistic way, while on the other hand, smart machines take over tasks which were originally performed by humans (Simmler & Frischknecht, 2021). A more recent example is the Chatbot Generative Pre-trained Transformer (ChatGPT), which, for instance, is able to formulate complex texts and write software codes. All these aspects have consequences for jobs and the roles employees have in organisations (Alfes et al., 2022; World Economic Forum, 2023). A recent study on the future of jobs by the World Economic Forum (2023) indicates that 83 million jobs will disappear, while 69 million new ones will emerge between 2023 and 2027. While technology increases the likelihood of routine and repetitive tasks disappearing, researchers emphasise that especially employees with fewer skills, such as those working in the fields of logistics, production and office administration, face a high risk of losing their job – a phenomenon also referred to as ‘technological unemployment’ (Alfes et al., 2022; Frey & Osborne, 2017; Wang & Siau, 2019). In contrast, one can see a rise in positions requiring social and creative intelligence and technological expertise, resulting in an intensified war for talents (Bhalla et al., 2018; Frey & Osborne, 2017). For instance, in the manufacturing arena, smart technologies such as the internet of things, cyber physical systems and cloud computing, employees are required to communicate and work together with smart machines. These analyse and optimise the production process,

provide feedback and report malfunctions or maintenance requirements (Nardo et al., 2020). In the field of HRM, People Analytics, defined as "the systematic identification and quantification of the people-drivers of business outcomes, with the purpose of making better decisions" (van den Heuvel & Bondarouk, 2017, p. 160), has gained importance (Margherita, 2022). This is especially enabled by the possibility to generate, collect and use a substantial amount of data at an ever-faster pace (Statista, 2023; Tallgauer et al., 2020). Between 2020 and 2025, the volume of data is expected to increase by around three times, from 64 zettabytes to 180 zettabytes (Statista, 2023), i.e., the equivalent of a stack of Blu-ray discs as much as 23 times the distance between Earth and the moon (Deloitte, n.d.). People analytics has the power to connect HR and business-relevant data to assess performance, human-related risks and people's attitudes, as well as to map career trajectories (Margherita, 2022). Furthermore, Big Data and AI can support many steps in the employee life cycle. These include recruitment and selection, as showcased by Tallgauer et al. (2020), or development, performance management, rewards and retention (Margherita, 2022). With the help of Big Data, Google, for example, identified ten characteristics of successful managers who have a positive impact on employee satisfaction (Garvin, 2013). The findings were integrated into recruitment decisions and training to improve the leadership culture and reduce employee turnover (Garvin, 2013). As outlined above, humans remain important in the digital era, but the required skills will undergo massive changes (McKinsey, 2020; World Economic Forum, 2024): 44% of current skills will be subject to change by 2028, leading to an increased need for re-skilling and upskilling in order to maintain employability (World Economic Forum, 2023). Moreover, taking into account that network structures are becoming more important, as reflected in the fact that people in organisations collaborate increasingly with others within and across organisational boundaries (see also the subsequent chapter), individuals need to take on more boundary spanning activities (Festing & Schäfer, 2022; Hesselbarth et al., 2024).

All in all, the examples of individuals collaborating with smart machines, as well as increased boundary spanning, show that work content is transforming in the new world of work.

2.1.3.4 Allocation and organisation of work

Finally, the allocation and organisation of work is also subject to transformation (Alfes et al., 2022). Hierarchies come under scrutiny because, in a complex world, managers are not able to solve organisational problems on their own but require employees as co-players to take responsibility and collaborate in networks where they proactively contribute to problem-solving (Drazic & Schermuly, 2024; Harsch et al., 2016). Increasingly, implemented approaches such as holacracy or agility rely on decentralisation, participation and autonomy (Drazic & Schermuly, 2024; Schäfer et al., 2018; Schell & Bischof, 2022) – principles that stand in direct contrast to traditional ways of working based on hierarchy and control. Agile practices such as agile communication and team autonomy are positively associated with innovative work behaviour via psychological empowerment (Malik et al., 2021). Further practices in this regard include sprints, iterative development, stand up and retrospective meetings (Junker et al., 2023). These enable constant change, due to short-term goals (sprints), daily task alignment (stand up meetings) and regular reflections on tasks and goals (retrospective meetings) (Junker et al., 2023). Furthermore, agile practices and methods include Scrum and sprints, which aim at incremental and iterative product development (Hannola et al., 2013). Design thinking as an agile technique aims at solving problems and creating innovation via experimentation, fast prototyping, feedback loops and prototype adaptation (Liedtka, 2018; Razzouk & Shute, 2012). Within this process, customer needs are an integral aspect that allows organisations to create customer-centric products and services (Rösch et al., 2023). Moreover, one further trait associated with agility is the lean start up technique, whereby product development cycles are reduced by developing products and services with low effort and minimal viable products (Lee & Geum, 2021).

Based on Alfes et al. (2022), the previous section has (1) summarised different key areas of work undergoing transformational processes and (2) provided examples of specific forms of NWW. One can observe that NWW lead to transforming conditions at work, with regards to timing and location, relations, roles, tasks and the organisation and allocation of work. Furthermore, it has become clear that employees play a key role in the success of NWW (see also Helmold, 2021; Hesselbarth et al., 2024; Schermuly, 2021). Research indicates that specific characteristics especially are associated with NWW. In this regard,

for example, it has been established that the agility of individuals is associated with higher levels of remote and virtual teamwork (key area of work: work space and time) (Breu et al., 2002).

Table 1 provides a summary of the areas undergoing transformations and specific exemplary forms of NWW.

Key areas of transformation	Transformation of work towards…	Exemplary forms of NWW	Further exemplary sources
"Work space and time" (Alfes et al., 2022, p. 4363)	"Flexible (anywhere, anytime)" (Alfes et al., 2022, p. 4363)	• Fully remote work format • Hybrid work format	Gajendran and Harrison (2007); Gratton (2021)

"Work relations" (Alfes et al., 2022, p. 4363)	"On demand work […]" (Alfes et al., 2022, p. 4363)	• Freelancing
		• Gig work
		  • Capital platform work (e.g., Airbnb)
		  • Crowdwork (e.g., AmazonMTurk)
		  • App work (e.g., Uber)
		  • Direct contract work (e.g., contracted individuals)
		  • Subcontract work (e.g., salespersons on premises)
			Duggan et al. (2020); Hackl et al. (2017); Hausknecht (2017)

"Content of work" (Alfes et al., 2022, p. 4363)	"Augmentation and new roles" (Alfes et al., 2022, p. 4363)	Collaboration with smart machines based on AI and machine learning (e.g., smart factories and people	Buck et al. (2002); Marcinkus Murphy (2012); Margherita (2022); Nardo et al. (2020);

		analytics) • Boundary spanning activities	Simmler and Frischknecht (2021); Zimmermann (2019)
"Allocation and organization of work" (Alfes et al., 2022, p. 4363)	"Agile, participative, algorithmic" (Alfes et al., 2022, p. 4363)	• Agile Working • Agile practices (e.g., agile communication, team autonomy, sprints, iterative development, stand up meetings, retrospective meetings) • Agile methods (e.g., Scrum, Kanban) • Agile techniques (e.g., design thinking, lean start up) • Agile team designs (e.g., squads, tribes) • Holacracy	Hannola et al. (2013); Hesselbarth et al. (2024); Junker et al. (2023); Lee and Geum (2021); Liedtka (2018); Malik et al. (2021); Razzouk and Shute (2012); Rösch et al. (2023); Schell and Bischof (2022); Smite et al. (2019)

Table 1: Overview of key areas of transformations and specific forms of NWW (Source: Own representation)

2.1.4 The bright and the dark side of New Ways of Working

Having presented the different transformations around work and its specific forms in the preceding chapter, this section will dive deeper into the positive and negative aspects associated with them.

Work space and time. Despite the increasing significance and attention given to remote work, research to date remains highly undecided on whether it has a positive or a negative impact on individuals (Alfes et al., 2022; Gajendran & Harrison, 2007). In a meta-analysis, Gajendran and Harrison (2007) suggest that remote work offers several advantages, including higher levels of perceived autonomy, lower levels of work-family conflict and unexpectedly higher levels of relationship quality with the supervisor. Furthermore, in this study, the authors indicated that telecommuting yielded favourable results concerning more distal outcome variables such as job satisfaction, role stress and turnover. Some of these positive findings, including job satisfaction and lower work-family conflict, are also backed by a more recent, post-pandemic study by Kunze and Zimmermann (2022). In addition, they outline that study participants reported higher levels of productivity, while Gajendran and Harrison (2007) did not find an association between teleworking and job performance. Many of the beneficial aspects associated with remote work can be traced back to the increased flexibility it offers, in that it allows employees to reconcile their work and private life (Adamovic et al., 2022; Baltes et al., 1999). Furthermore, organisations benefit from reduced costs, as less office space and fewer organisational resources are needed (Golden, 2009). Moreover, telework can be a means to attract new and retain current employees, as it is perceived as an appealing organisational feature (Golden, 2009; Randstad, 2021). Concerning the specific phenomenon of virtual teamwork, researchers report on advantages such as sourcing experts from a global talent pool and lowering travel cost, time and associated stress (Dubé & Robey, 2009; Zimmermann, 2019).

In contrast to these positive associations, research also reports on the disadvantages of remote work. High-intensity work activities, overwork and blurred boundaries between work and private life have been reported as reasons for lower well-being (Charalampous et al., 2019). As remote workers are spatially detached from their office and the

corresponding social environment, they run a high risk of experiencing feelings of isolation and loneliness (Kunze & Zimmermann, 2022; Walz et al., 2023). Furthermore, health issues need to be considered. On the one hand, remote workers tend to work despite being sick, a phenomenon known as 'presenteeism' (Kunze & Zimmermann, 2022; Steidelmüller et al., 2020), while on the other hand, the lack of ergonomic workplaces at home poses a threat to physical health (Federal Ministry for Economic Affairs and Energy of Germany, 2021). Under conditions of geographical distance, which may result in a disconnection between employee and employer, organisations have to cope with how they can establish or maintain employee identification with the organization and how they build cohesion and trust among team members (Federal Ministry for Economic Affairs and Energy of Germany, 2021; Kaiser et al., 2022; Powell et al., 2006; Zimmermann, 2019). Furthermore, as remote work represents a different work format than work in corporate offices, organisations must reconsider, for instance, approaches to managing people, such as leadership styles and HRM systems and practices, to make it a successful endeavour (Günther et al., 2022).

Work relations. Traditionally, different types of on-demand work have been considered "bad jobs" (Kalleberg et al., 2000, p. 256), as they often lack pension and health insurance coverage and offer low wages (Kalleberg et al., 2000). At the same time, standard work relations have often been characterised as "good jobs" (Kalleberg et al., 2000, p. 257) due to their protection through collective agreements and labour laws (Kalleberg et al., 2000). Over time, however, the perception of what is a 'bad' and 'good' job has changed substantially, and thus it is "it is probably no longer useful to attempt to categorize jobs with such a simple dichotomy" (Cappelli & Keller, 2013, p. 580). For many workers, on-demand work brings them increased flexibility and autonomy, in that it provides them with the potential to improve their work-life balance, as they can decide whether, when and how they work (Lehdonvirta, 2018; Wood et al., 2019). However, especially workers who are in high demand, due to their reputation and skills, can expect high job quality, which is characterised by high income and low levels of work intensification (Wood et al., 2019). When applying on-demand work, organisations particularly benefit from the possibility of sourcing skills that are not available internally, as well as keeping in check personnel costs by avoiding staff surpluses (Hesselbarth et al., 2024; Jaehrling & Kalina, 2020; Kalleberg et al., 2000).

Disadvantages on the individual level include low pay, excessive working hours, unsocial work schedules and isolation, especially for workers with low-to-medium skills (Jaehrling & Kalina, 2020; Wood et al., 2019). Furthermore, it is reported that gig workers are highly controlled and monitored by algorithms (Waldkirch et al., 2021). Some of them even take screenshots or randomly switch on webcams of the workers, which can lead to high levels of dissatisfaction and pressure (Waldkirch et al., 2021). In this regard, gig work has been subject to severe criticism in recent years, due to its "exploitative labour conditions that predate today's minimum standards" (Healy & Pekarek, 2020, p. 157). Organisations, especially when first using on-demand work practices, face higher coordination costs due to inexperience with the platform and dealing with on-demand workers (Lustig et al., 2020).

Content of work. In terms of work content, there are several advantages and disadvantages for individuals and organisations alike. This section considers the implications of new and augmented roles. First, for the specific setting of smart factories, machines can contribute to workplace safety due to the safe handling of hazardous devices, improved ergonomics and work enrichment, as they take over physically demanding work and repetitive tasks while workers engage in more fulfilling activities (e.g., cognitive or collaborative tasks) (Dornelles de Assis et al., 2022; Nardo et al., 2020). In line with these findings, Kortmann et al. (2022) indicate that working alongside digital machines is associated with higher job quality. On the side of the organisations, the collaboration between humans and machines yields several advantages, including enhanced product and service quality, greater efficiency, greater flexibility as well as better working conditions (Margherita, 2022; Marler & Boudreau, 2017; Nardo et al., 2020; van den Heuvel & Bondarouk, 2017). The use of Big Data has been reported as a source of competitive advantage, as it allows organisations to better understand important aspects such as customer requirements, market trends, business processes and supply chain dynamics, which in turn enables better and quicker decision-making and, in turn, efficiency (Medeiros & Maçada, 2022).

Besides these advantages, disadvantages also stem from these changes. An overarching implication when employees need to take over new or augmented roles is the requirement for accelerated and profound re-skilling and up-skilling, which poses

intensified job demands on them (Rantanen et al., 2021; World Economic Forum, 2023). Research has shown that such demands can be associated with stress symptoms, including problems with memory, concentration, decision-making and clear thinking (Rantanen et al., 2021). At the same time, however, researchers indicate that job demands that are associated with achievement and individual growth, so-called challenge stressors, are indeed associated with strain but that active coping with these stressors offsets its negative effects and leads to favourable outcomes such as job satisfaction and organisational commitment (Podsakoff et al., 2007). Furthermore, the increased use of technology leads to massive changes in the world of work. In particular, the disappearance of routine and repetitive tasks results in the destruction of jobs requiring low skills (Frey & Osborne, 2017). This can subsequently lead to increased fear of unemployment, which in turn is associated with poor mental and physical health, such as stress, anxiety, lower motivation, back pain, headaches and stomach aches (Caroli & Godard, 2016; McClure, 2018). Furthermore, the change of work content towards greater cooperation with machines is prone to technostress, defined as "stress created by information and computer technology" (Tarafdar et al., 2007, p. 301). When individuals have been exposed to technostress for a long time or repeatedly, lower levels of job satisfaction, organisational commitment and productivity have been reported (Berger et al., 2023; Ragu-Nathan et al., 2008). On an organisational level, greater human-machine interactions represent major challenges for decision-makers. Research has shown that this cohort is usually not familiar with human-machine principles, but at the same time they need to answer important questions such as those associated with legacy (i.e., who is responsible for product and production security?), which, from a legal point of view, is still unclear (Simmler & Frischknecht, 2021).

Allocation and organisation of work. Concerning agile practices, it has been shown that they are associated with higher levels of psychological empowerment, which is linked to greater innovative activity of individuals (Malik et al., 2021). Moreover, agile practices are linked with greater job satisfaction due to greater autonomy, less task fragmentation and frequent feedback (Tripp et al., 2016). As described before, agile practices can make a considerable contribution to organisational innovativeness, as they have the potential to speed up processes and take the customer's perspective in product development processes (Hannola et al., 2013; Junker et al., 2023). On the other side, these new ways of allocating and organising work have some pitfalls. Agile teams, for instance, report higher levels of

peer pressure, which results from increased collaboration and interdependence of team members under conditions of increased autonomy and flat organisational hierarchies (Khanagha et al., 2022). Furthermore, as agile approaches to work are complex, individuals need to engage in profound learning (Kropp et al., 2014), which might increase cognitive demands. On the organisational level, implementing agility also requires major effort. It involves fundamental changes within organisations, and it is even more difficult for rather traditional organisations characterised by hierarchy and control (Kropp et al., 2014). Organisations need to engage in work redesign, promote and develop new mindsets of stakeholders and heavily invest in learning (Kropp et al., 2014; Reiche, 2023; Tripp et al., 2016).

To sum up, NWW offer a multitude of advantages, but they also come with drawbacks. On the positive side, organisations can benefit, for instance, from greater flexibility, faster decision-making and product development as well as innovativeness – aspects that are decisive in dynamic environments characterised by changing requirements (Hansen et al., 2019; O'Reilly & Tushman, 2008; Salmen & Festing, 2022). On the other side, NWW require considerable changes in work designs, management practices, mindsets and skills, resulting in high costs and associated demands that can be overwhelming for organisations and employees, leading, for example, to higher stress levels.

Weighing these positive and negative aspects of NWW, organisations should evaluate carefully whether they implement them. This is especially important because not all organisations are required to implement NWW to the same extent. Research indicates that they implement NWW as an answer to external dynamism (Alfes et al., 2022; Hesselbarth et al., 2024; Schermuly, 2021). As described above, in this context flexibility, innovativeness and speed are crucial for organisational survival (Hansen et al., 2019; O'Reilly & Tushman, 2008), which can be delivered by NWW. Organisations that are exposed to dynamism and face a high risk to disappear include, for example, those operating in industries such as medical equipment, IT, pharmaceutics, chemicals and electronics (Dyer et al., 2014), while industries such as personal services, including among others dry cleaning and hairdressers, are exposed to fewer dynamics (Dyer et al., 2014) and thus have a lower need to implement NWW. In addition, it may be relevant for the same

organisation to introduce NWW for some positions while still pursuing more traditional approaches to work in other positions. Especially for positions that require efficiency and are thus based on routines and rules, NWW could play a subordinate role.

All in all, organisations should therefore evaluate whether NWW give them an advantage. If so, they need to consider in which positions, what type of NWW and how they implement them.

2.2 Driving forces of New Ways of Working

2.2.1 Overall driver: The dynamic environment

Having provided an in-depth understanding of NWW, the following section covers their driving forces. In this regard, their implications for the key areas of work (i.e., workspace and time, work relations, work content and allocation and organisation of work) identified by Alfes et al. (2022), are presented. This section first starts with an outline of the overall dynamic environment before diving deeper into megatrends (i.e., globalisation, digitalisation and demographic change) and one disruptor (i.e., global crises) and their implications. Finally, three different strategies are presented in terms of how organisations react to these dynamics.

As stated in the introduction, many organisations are exposed to dynamism resulting from external changes (Dyer et al., 2014). These external changes have the potential to pose a major threat to the existence of many organisations, as they are less predictable and manageable as compared to internal changes (Mithani, 2020). Furthermore, particularly the speed and rhythm of change has accelerated considerably (Barkema et al., 2002; Bruch & Block, 2019; Tseng & Lin, 2011). This can be traced back to the increasing emergence of different megatrends and disruptors which are rooted in the external environment of the organisation (Bundesakademie für Sicherheitspolitik, 2023; Linthorst & de Waal, 2020). Megatrends are defined as “deep and profound trends, global in scope and long-term in effect, touching everyone on the planet and shaping our world for many years to come” (PwC, 2022), while disruptors represent developments that also have a strong transformative character but are less predictable in terms of emergence and effects as compared to megatrends (Linthorst & de Waal, 2020). Both megatrends and disruptors

have a profound influence on developments in relation to internal firm factors, including approaches to work (Bundesakademie für Sicherheitspolitik, 2023; Hesselbarth et al., 2024; Linthorst & de Waal, 2020). While various types of megatrends and disruptors exist today (Linthorst & de Waal, 2020; PwC, 2022), scholars mainly discuss four of them in relation to work transformation, namely globalisation, digitalisation, demographic change and global crises, here specifically the Covid-19 pandemic (Alfes et al., 2022; Beltrán-Martín & Roca-Puig, 2013; Drazic & Schermuly, 2024; Wilkinson & Barry, 2020). These drivers and their implications for the different key areas of work are presented below.

2.2.1.1 Megatrend 1: Globalisation

Globalisation, defined as "the development of an increasingly integrated global economy marked especially by free trade, free flow of capital, and the tapping of cheaper foreign labor markets" (Merriam-Webster, n.d.-b), leads to shifts in the business environment which in turn shape the nature of work. First, globalisation leads to an intensification of competition, as organisations are exposed to an increasing number of rivals from all over the world (Wiersema & Bowen, 2008). Consequently, many are confronted with intensified pressure to innovate and drive efficiency, in order to keep pace with novel products and services and offer reasonable prices (Aghion et al., 2018; Gorodnichenko et al., 2010; Handoyo et al., 2023; O'Reilly & Tushman, 2008). Second, globalisation, or more specifically the integration of labour markets, results in greater global mobility, especially among highly qualified individuals (Collings et al., 2018).

These trends herald transformations in different areas of work (as defined by Alfes et al., 2022), namely work relations, work content and the allocation and organisation of work. First, in terms of work relations, nonstandard work relations (e.g., freelancing, gig, work) come to the fore, as economies are increasingly integrated and digital platforms are available so that organisations can source labour internationally (Graham et al., 2017; Jaehrling & Kalina, 2020; Kalleberg et al., 2000). These allow them to source novel skills externally and avoid staff surpluses by employing on-demand working models and thus respond to innovation and efficiency demands in a globalised world (e.g., Hesselbarth et al., 2024; Jaehrling & Kalina, 2020; Kalleberg et al., 2000). Second, in relation to work content, the specific new and augmented roles in an innovation- and/or efficiency-driven

environment include individual agility and ambidexterity (Caniëls & Veld, 2019; Mom et al., 2019; Salmen & Festing, 2022). Third, in terms of the allocation and organisation of work, agile operating models including specific practices, techniques, methods and team designs gain importance because they are associated with greater innovative capacity (Hannola et al., 2013; Junker et al., 2023).

2.2.1.2 Megatrend 2: Digitalisation

The world has witnessed a dramatic increase in the development and application of technologies such as robotics, AI, machine learning and automation in the last few decades (OECD, 2023; Vrontis et al., 2022). These developments have led – and will continue to lead – to fundamental changes in the business world and in society; as Wang and Siau (2019) put it "the way we work, the way we live, and the way we interact with others are expected to be transformed at a speed and scale beyond anything we have observed in human history" (p. 61). According to a study by McKinsey (2018a), many organisations (try to) capitalise on the benefits of these technologies and undergo a digital transformation. This effort can result in new business models, products and services (Hackl et al., 2017). Moreover, besides these more strategic implications, digital technologies shape how people work in several ways.

First, in a world coined by digital technology, mobile devices, collaborative software and cloud services have transformative power over workspace and time (Schermuly, 2021). More specifically, we observe a rise in flexible work formats, such as remote or hybrid work (Schermuly, 2021). Second, new types of work relations are enabled by digital solutions, such as platforms that connect organisations with (gig) workers (Duggan et al., 2020). Third, the development of smart machines using, for example, AI, machine learning and Big Data has transformed the content of work. For instance, there has been an increase in complex human-machine interaction leading to the augmentation of roles and the development of new ones (Simmler & Frischknecht, 2021). Fourth, the allocation and organisation of work is also impacted. Digitalisation therefore requires organisations to innovate (Hackl et al., 2017), which in turn might trigger the adoption of new working formats such as those associated with agility (Hannola et al., 2013)

2.2.1.3 Megatrend 3: Demographic change

Another megatrend that significantly impacts the world of work is demographic change. Today and in the future, many Western countries (will) have to cope with an ageing society as birth rates fall and medical care improves (European Union, 2023; Ministry of Internal Affairs and Communications of Japan, 2023; Schneid et al., 2016; United Nations, n.d.). For example, in 2021, the ratio of working-age people to people aged 65+ was already three to one (European Union, 2023), and in 2050, around 30% of the EU's inhabitants will be over 65 (European Union, 2023). At the same time, however, many other countries will witness a growing population with a high share of people at working age, including, for example, those located in sub-Saharan Africa, where the population is expected to double by 2050 (United Nations, n.d.). There are several implications of these developments. First, Western countries face high retirement rates, which is an issue because elderly people with their long work experience have valuable skill repositories (European Union, 2023; Harvey, 2012). Second, the scarcity of labour in Western societies and the abundance thereof in other parts of the world are stimuli for global mobility and global work. For instance, experts have calculated that Germany requires an inflow of 400,000 skilled employees per year to maintain its social and welfare systems (The Federal Government of Germany, 2023), all of which leads to greater cultural, ethnic and religious diversity in the workplace.

As a consequence, work space and time is transformed due to the scarcity of labour. Nowadays, employers need to gain the attraction of (potential) employees, and in this regard Randstad (2021) has shown that in Germany, employer attractiveness is highly associated with the possibility of working from home. Offering remote work also allows employers to source from a greater pool of (potential) employees, thus tackling once again the paucity of labour (Kaiser et al., 2022). Moreover, remote work formats have been argued to be especially relevant for older employees, in that they offer a better work-life balance and thus contribute to longer employability (Buck et al., 2002). Furthermore, due to the shortage of labour in Western countries and oversupply in other regions of the world, work relations are changing towards gig work, i.e., Western organisations increasingly source from a global market of digital workers (Ashford et al., 2018).

2.2.1.4 Disruptor: Global Crises

Major accelerators for change in the organisational environment are global crises (PwC, 2023). In the last few years, many organisations have been confronted with a multitude of different crises, including climate change, geopolitical tensions, worldwide wars and the Covid-19 pandemic (PwC, 2023). While this doctoral dissertation acknowledges that all these crises impact the way people work, in the following the implications of the Covid-19 crisis will be presented. The pandemic led to a "great acceleration" (McKinsey, 2020) of pre-crisis developments, and in comparison to other crises, it transformed the world of work immediately, quickly and on a global scale across all industries (Caligiuri et al., 2022; Minbaeva, 2021). Therefore, this phenomenon is especially significant with regards to NWW.

One key area of work was impacted immediately and quickly as a result of Covid-19, namely work space and time (Caligiuri et al., 2022; Minbaeva, 2021; Walz et al., 2023). When the pandemic unfolded, a huge number of employees abruptly started to work from home (Caligiuri et al., 2022), and as a consequence, leadership tasks and teamwork took place from distance (Aroles et al., 2021; Caligiuri et al., 2022). In addition, the megatrend digitalisation accelerated the development of digital business models and the adoption of digital technologies (McKinsey, 2023b; Minbaeva, 2021).

As Satya Nadela (CEO of Microsoft) commented in relation to these accelerations "We've seen two years' worth of digital transformation in two months" (Spataro, 2020; see also Minbaeva, 2021). Indeed, a McKinsey survey (2020) found that the pandemic prompted organisations to speed up their digital transformation by many years. This is also relevant for NWW, as digitalisation has been shown to be one of the transformative powers of work. All in all, it can be concluded that the Covid-19 crisis represented a "window of opportunity" (McKinsey, 2020) in which existing modi operandi were suspended to some extent and quick steps were taken towards a new world of work.

2.2.2 Three types of organisational reactions to the dynamic environment

The abovementioned megatrends and disruptors break up current logics and thus create the need to change a firm's internal environment, including the way people work

(Alfes et al., 2022; Beltrán-Martín & Roca-Puig, 2013; Drazic & Schermuly, 2024; Mithani, 2020; Tseng & Lin, 2011). As aptly stated by Drazic and Schermuly (2024) "many organizations have recognized that external organizational complexity must be addressed with internal organizational complexity" (p. 63). However, not all organisations are successful at adapting their internal environment to the external, or at least not to the same extent. While some remain in the status quo or over-accelerate change, others strive to achieve a fit with the external environment (exemplary sources include Bruch & Menges, 2010; O'Reilly & Tushman, 2008). The next section summarises different ways in which organisations react to the dynamic environment (i.e., remaining in the status quo, over-accelerating change, achieving fit).

Remaining in the status quo. Especially well-established organisations often persist in their current ways of operating. This cohort tends to rely too much on currently lucrative business models and additional factors that have led to success in the past (O'Reilly & Tushman, 2008). As a consequence, this leads to high levels of inertia, a lack of sensitivity for external trends and a lack of adaptability (Gans, 2020; O'Reilly & Tushman, 2008). These organisations run the high risk of being substituted by new competitors which can match the external environment better and more quickly (McKinsey, 2018b; O'Reilly & Tushman, 2008; Smith & Tushman, 2005). Studies and statistics provide evidence for this so-called "success syndrome" (O'Reilly & Tushman, 2008; Tushman & O'Reilly III, 1996, p. 17). In a study covering three major industries, McKinsey (2018a) determined that although established organisations acknowledge the high business impact of emerging trends, many of them do not prepare themselves sufficiently, for example in the form of developing future-oriented business models. Another indicator is the decreasing life span of organisations listed in the Standard & Poor's 500 index, which fell from more than 30 years in 1965 to 21 years in 2020 and which showcases that organisations cannot be sure of their continued existence in the market (Hillenbrand et al., 2019; O'Reilly & Tushman, 2008; Statista, 2023). Furthermore, the famous case of Nokia (Ciesielska, 2018) illustrates how a market-leading organisation with a market share of around 50% in the mobile phone market in 2007 (Richter, 2015) drastically lost its position due to its failure to prepare for market trends. As such, when the Apple smartphone was introduced, Nokia lacked the necessary skills and ecosystem to develop suitable software solutions that could be combined with their hardware. Their previous success prevented them from exploring the

mobile phone market and thus recognising, on the one hand, the opportunities arising from technological advancements, and on the other hand the risk emanating from new competitors, such as Apple and Samsung (Ciesielska, 2018).

Over-accelerating change. Although speed represents an important element for succeeding in fast-changing environments (Burke & Morley, 2023; McKinsey, 2018a; Siggelkow & Rivkin, 2005; Teece, 2018), some organisations start to push too hard for speed and end up in an "acceleration trap" (Bruch & Menges, 2010). As such, they start too many activities targeted at change at an excessive speed, including for instance activities favouring faster innovation processes or increases in performance targets (Bruch & Menges, 2010; Prange, 2021). While this may work for some time, in the long run organisations and employees suffer from overload and collective states of exhaustion (Bruch & Menges, 2010). In addition, an imprudent over-emphasis on speed leads to lower profit and sales, while a focus on speeding up and taking time to align business activities to organisational needs increases performance (Davis & Atkinson, 2010). Often, this speed goes hand in hand with missing goals (Schermuly, 2021)

Achieving fit. A third way to react to the dynamic environment is achieving fit (Ketkar & Sett, 2009; O'Reilly & Tushman, 2008; Wright & Snell, 1998), which helps organisations constantly reach congruence with external requirements (O'Reilly & Tushman, 2008). As such, firms following this approach place emphasis on being both dynamic and stable, and they show high adaptability, speed and action orientation, on the one hand, and efficiency and internal alignment on the other (Aghina et al., 2015; Ketkar & Sett, 2009; O'Reilly & Tushman, 2008; Pina e Cunha & Vieira da Cunha, 2006). Organisations achieving an ongoing fit can renew themselves on a continuous basis by adapting their approaches, processes, structures and competences while at the same time providing a "stable backbone" (Aghina et al., 2015). As a result, they ensure transparency and guidance, including clear objectives and corresponding metrics or clear responsibilities for decisions, all of which enables them to address novel opportunities and threats rapidly when arise in the environment (Aghina et al., 2015; Burnes, 2005; O'Reilly & Tushman, 2008; Pina e Cunha & Vieira da Cunha, 2006). Currently, there is only limited research on whether and to what extent organisations that strive for ongoing fit adopt NWW. Studies in the research fields of ambidexterity, however, indicate that organisations following this

strategy are more prone to do so (O'Reilly & Tushman, 2008). One of the factors that can support organisations implementing NWW is HRM, and so the next section will dive deeper into this notion.

2.3 HRM and New Ways of Working

2.3.1 Understanding HRM

HRM is understood as "policies, practices, and systems that influence employees' behavior, attitudes, and performance" (Noe et al., 2019, p. 4). HR policies represent an overall employee-centred program determining which HR practices are in place (e.g., strong performance focus). In turn, HR practices refer to concrete activities geared towards obtaining certain results (e.g., base salary with performance bonuses). HR systems reflect bundles of different HR practices that are aligned with each other to achieve a certain goal (e.g., high performance work systems (HPWS)) (Boon et al., 2019; Lepak et al., 2006).

Research adopting a strategic perspective on HRM has shown that it can considerably contribute to organisational-level performance via the abovementioned impact on employees (Bowen & Ostroff, 2004; Lepak & Shaw, 2008). This is particularly the case if HR practices are harmonised with each other and match the organisational and environmental context (Boon et al., 2019; Lepak & Shaw, 2008; Martín-Alcázar et al., 2005). Based on these ideas, one can find different theoretical perspectives adopted in strategic HRM research, among which the universalistic, configurational and contingency perspectives are most strongly represented (Lepak & Shaw, 2008). First, the universalistic perspective on HRM proposes a "one-size-fits-all approach" (Harney, 2016, p. 72). Here, it is suggested that there are certain best practices in HRM that contribute directly to performance and hence should be implemented by all organisations alike (Harney, 2016; Lepak & Shaw, 2008; Martín-Alcázar et al., 2005). Second, the configurational perspective emphasises the value of internally aligning different HR practices in order to drive organisational performance (Lepak & Shaw, 2008), the underlying reason for which is that different practices, when combined, can create complementarities that help organisations achieve their goals (Boon et al., 2019). Third, the contingency perspective proposes that HRM practices and/or systems can only be effective when they fit organisational and environmental aspects (Bowen & Ostroff, 2004; Harney, 2016; Lepak & Shaw, 2008).

Organisational aspects include corporate strategy, technology, company size and culture, while environmental aspects encompass the competitive landscape, technology, legal requirements and industry dynamism (Lepak & Shaw, 2008; Martín-Alcázar et al., 2005). Following this view, only suboptimal performance can be expected if organisations fail to create a fit between HRM and contextual factors (Harney, 2016; Lepak & Shaw, 2008). More recently, these considerations of fit between HRM and context have been developed further in the form of the HR ecosystems perspective (Snell & Morris, 2021). While traditional considerations on fit are rather static, viewing organisations as stable entities, this perspective shifts the focus on the need to account for change and complexity (Snell & Morris, 2021). In this vein, the HR ecosystems perspective advocates a dynamic alignment between HRM and the requirements of an organisation operating in a dynamic environment (Snell & Morris, 2021). As such, aligned HRM develops and implements new elements and thus helps the organisation to be adaptable and flexible (Snell & Morris, 2021). According to the HR ecosystems perspective, one of these elements represents NWW, thereby allowing for a more flexible workforce due to greater elasticity in terms of workspace and time, on-demand work relations, greater autonomy and participation in work planning and allocation (Snell & Morris, 2021). From a theoretical viewpoint, the HR ecosystems perspective regards organisations as open systems that are linked to and influenced by their environment (Burke & Morley, 2023; Hesselbarth et al., 2024).

The HR ecosystems perspective, with its links to the open systems perspective, is a valuable lens through which to study the role of HRM with regards to NWW, because it emphasises the need for continuous adaptation. The dynamic environment influences how people work, as well as the design of HR practices and systems (Festing & Schäfer, 2022; Snell & Morris, 2021). Thus, organisations are required to depart from practices that have worked in stable environments and shift their attention to HR practices and systems that allow for flexibility and adaptability (Festing & Schäfer, 2022; Snell & Morris, 2021). According to the HR ecosystems perspective, the key idea is that organisations cater to different ecosystems with tailored HR practices and systems that align with specific requirements (Festing & Schäfer, 2022; Snell & Morris, 2021). For the specific case of NWW and dynamic environments, several researchers advocate the idea of tailored practices that are linked to this setting (Festing & Schäfer, 2022; Hansen et al., 2019; Hölzl, 2022). The following chapter will elaborate further on this point.

2.3.2 The role of HRM for New Ways of Working

The aforementioned megatrends and disruptors, including globalisation, digitalisation, demographic change and global crises, lead to fundamental changes in the context of organisations. One example includes the strong dynamism to which many organisations are exposed (Dyer et al., 2014). As mentioned above, this has an impact on a firm's internal context factors, including the ways in which work is organised and performed (Alfes et al., 2022; Cappelli & Tavis, 2018; Dyer et al., 2014). In this regard, an increasing number of organisations adopt NWW or intend to do so (Alfes et al., 2022; Drazic & Schermuly, 2024). In line with the HR ecosystems perspective, HRM needs to be aligned to this context in order to contribute to adaptability and flexibility (Snell & Morris, 2021). This implies that organisations that have already implemented NWW, or plan to do, might consider tailoring HRM practices and/or systems to this specific setting. As mentioned above, this is also backed by recent research in the field (see for example, Festing & Schäfer, 2022; Günther et al., 2022; Hansen et al., 2019; Hölzl, 2022). Studies indicate that aligned HRM practices targeted at the goal of NWW can be a vehicle to support the transformation of work. The mechanism behind this line of thought is that HRM enhances favourable employee characteristics, including attitudes, skills and behaviours (Noe et al., 2019). However, in line with the HR ecosystems perspective, it must be noted that there are not universally valid HRM solutions in the context of NWW that are appropriate for all organisations. Rather, a firm needs to consider many additional factors inherent in the ecosystem when designing its HRM (Snell & Morris, 2021). Furthermore, research shows that the association between NWW and HRM is not uni-directional but bi-directional. As such, it is proposed that NWW also transform HRM activities (e.g., Cappelli & Tavis, 2018). In this regard, Cappelli and Tavis (2018) present case studies of several organisations, where agile approaches to work have triggered HRM to implement simpler, faster and more flexible HR practices to address the business needs of speed and flexibility in dynamic environments. For instance, training & development focuses on (1) learning formats on demand via online programs, (2) identifying required skills based on technology and (3) succession planning via a short-term approach Cappelli and Tavis (2018).

Other studies suggest NWW being supported by HRM activities that fit this specific context (e.g., Hansen et al., 2019; Salmen & Festing, 2022). This is also the focus of this research, so the following section provides concrete examples on the extent to which these HRM practices and systems enable and support NWW. For this purpose, this dissertation once again refers to the framework developed by Alfes et al. (2022) and outlines the role of HRM in different key areas of work undergoing transformation.

HRM & work space and time. In the context of remote work, Günther et al. (2022) find a positive association between telework-oriented HRM and well-being of teleworkers during the Covid-19 pandemic. The study results show that HRM can supply important job resources that balance job demands arising from telework. For instance, overwork and blurring work-life boundaries could be counterbalanced by measures increasing the self-care of employees. As such, HRM can offer access to psychological support and/or coaches, which the authors subsume under the concept of "health care-oriented HRM practices" (Günther et al., 2022, p. 356). Furthermore, social isolation can be tackled by "information and communication-oriented HRM practices" (Günther et al., 2022, p. 357) in that conditions are established under which peers communicate well with each other and employees stay informed about current developments.

HRM & work relations. Many of the new forms of work relations, such as freelancing and gig work, call into question the current conceptualisation of HRM and related practices (Alfes et al., 2022; Duggan et al., 2020). Duggan et al. (2020) highlight how algorithmic HRM (i.e., practices executed based on algorithms) manage gig workers. For instance, in terms of labour, assignment algorithms decide how jobs are allocated by selecting workers who are faster or better at serving a particular client, thus maximising overall speed and efficiency (Duggan et al., 2020). Role crafting as well as learning and development very often fall under the self-responsibility of the contract worker, while practices such as labour assignment, performance management and rewards are performed by algorithms (Alfes et al., 2022; Duggan et al., 2020; Reiche, 2023). The reason why contract workers are addressed by HR practices to a limited extent is that this cohort is self-employed and has no employment relationship with the organisation (Duggan et al., 2020)

HRM & content of work. Today's world is represented by the emergence, disappearance and enrichment of jobs, leading to the development of new roles. Due to these developments, organisations face a strong demand for re-skilling and upskilling (McKinsey, 2020; World Economic Forum, 2023). Thus, HRM needs to concentrate on ongoing learning by implementing practices steered towards these goals (Dries et al., 2012; Ketkar & Sett, 2009). For instance, research has discussed the role of flexibility-promoting HR practices in this regard (Ketkar & Sett, 2009). Organisations employing them build and foster individual learning ability and develop novel skills, adaptability and flexibility with the help of recruitment & selection, training & development, performance management and reward practices (Ketkar & Sett, 2009). Practices targeting information-sharing, co-decision-making, suggestion systems and joint problem-solving enable employees to create important experiences and develop novel solutions – all of which can contribute to further skills development (Ketkar & Sett, 2009). Furthermore, job rotation, which is included in flexibility-promoting HR practices, exposes individual to different experiences and has been reported to be associated with higher levels of learning agility (Dries et al., 2012; Ketkar & Sett, 2009).

For the specific field of talent management (TM), Jooss et al. (2024) emphasise the crucial role of a skills-oriented perspective and advocate moving away from the traditional stock perspective on TM and instead adopting a process perspective. In this regard, data from their study indicate that dynamic skills-matching, understood as "the process by which individuals` skillsets are dynamically aligned with organizations' skill needs" (Jooss et al., 2024, p. 143), is a key feature for organisations.

HRM & allocation and the organisation of work. As discussed previously, organisations have different options in relation to allocating and organising work. Among them, one highly discussed topic represents the implementation of an agile approach. When organisations move from a rather hierarchical to an agile approach, work designs change fundamentally, moving towards greater autonomy and interdependence among firm-internal actors (Reiche, 2023; Tripp et al., 2016). Reiche (2023) highlights that HRM supports the implementation of work designs supporting agility in several ways, including de-centralised and participative HR practices. For example, employees take on proactive roles and reshape work themselves, leading to greater amount of job rotation and project

work. Next, in performance appraisals, peer feedback is essential, as work is conducted in self-directed teams. In addition, working in agile settings requires employees to develop agile values and skills (Kropp et al., 2014). To facilitate this, Kropp et al. (2014) suggest implementing different development approaches, including analysing and then further developing values towards more agile ones, learning through experiences in an agile setting and learning through exchange with agile teams.

All in all, these exemplary studies indicate that HRM is transforming in contexts characterised by NWW, which provides strong support that the HR ecosystems perspective is applicable for studying the role of HRM in contexts related to NWW. Furthermore, the studies suggest that HRM practices and systems targeting NWW or related challenges can indeed contribute to NWW. However, even though this section has addressed many HRM practices and systems intending to contribute to NWW, it can also be observed that there is still relatively scarce research on this topic. On the one hand, the overall role of HRM for some areas of NWW is under-researched (e.g., gig work, agile work). On the other hand, there is also a tendency in related research fields not to investigate HRM that is geared towards NWW but to focus on proxies instead (e.g., the ambidexterity research field). This research seeks to contribute to fill these research gaps. To this end, it conceptually and empirically examines the role of aligned HRM in the context of NWW. For this purpose, it studies the role of HRM in relation to employee characteristics in three manuscripts (i.e., individual agility, individual boundary spanning and individual ambidexterity) and moves beyond that by highlighting the role of these characteristics for NWW.

2.4 Summary of the literature review

The following will provide an overview of the key findings of the encompassing literature review. Figure 2 visualises the key themes and shows how they are associated with each other.

The megatrends of globalisation, digitalisation and demographic change, and the disruptor Covid-19 pandemic, have led to strong dynamism in the firm external environment and have been discussed as the main driving forces of NWW (Alfes et al., 2022; Drazic & Schermuly, 2024; Schermuly, 2021; Wilkinson & Barry, 2020). The Covid-19 pandemic especially led to an acceleration of the transformation towards NWW,

because the outbreak intensified digitalisation and resulted in overnight shifts to remote work, all of which has fuelled further transformations in work (Caligiuri et al., 2022; Minbaeva, 2021). While work has always changed, Alfes et al. (2022) argue that the transformative process underlying the development of NWW is characterised by extraordinary speed, spread and depth. To enable this transformative process towards NWW, HRM plays a key role (see, for example, Günther et al., 2022) because people are decisive for the successful implementation of NWW, and HRM has the power to influence employee characteristics (Noe et al., 2019), such as those supportive of NWW (Breu et al., 2002; Günther et al., 2022; Harsch & Festing, 2020).

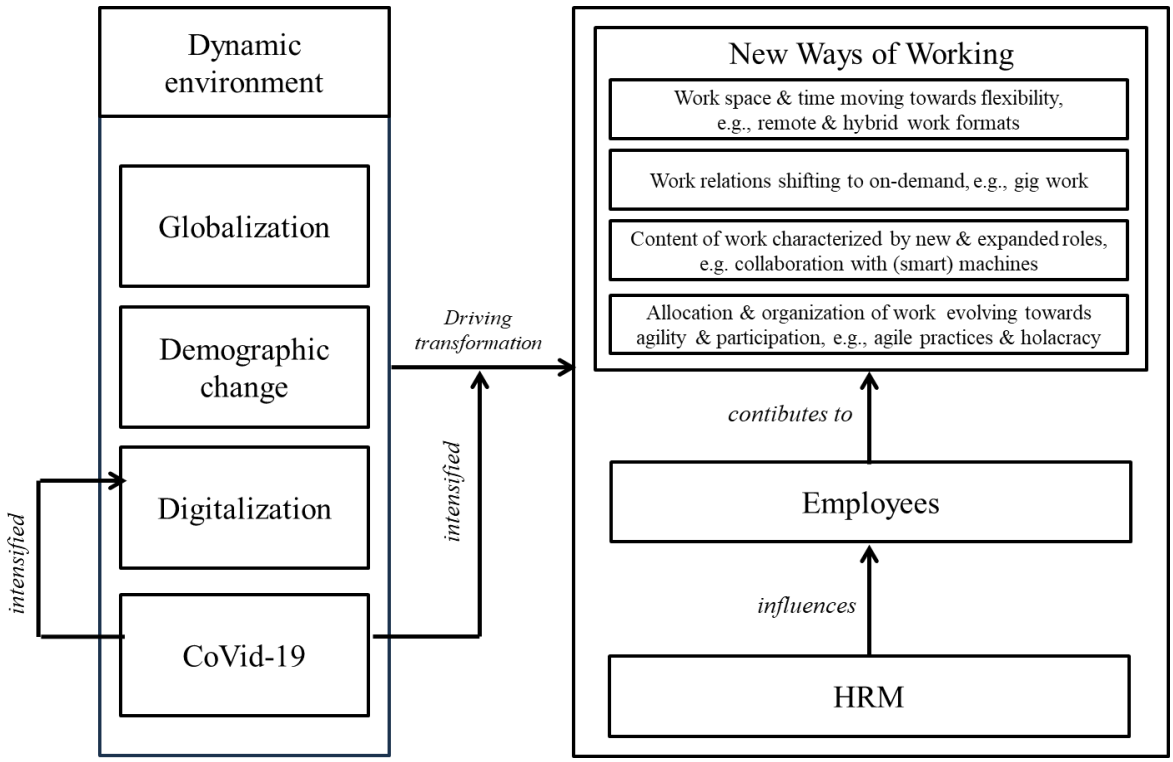

Figure 2: Framework presenting the drivers of NWW as well as the role of HRM and employees for NWW (Source: Own representation)

3 COMPOSITION OF THIS DOCTORAL DISSERTATION

This chapter is dedicated to the manuscripts in this doctoral dissertation by providing an overview, presenting the research objectives and summarising the paradigmatic orientations and research methods.

3.1 Research manuscript outlines

Three manuscripts form the basis of this overall research project (see Figure 3 for an overview and Table 2 for more detailed information). These focus on the role of HRM for employee characteristics. In this regard, different employee characteristics are under investigation, including employee agility (Manuscript 1), individual boundary spanning (Manuscript 2) and individual ambidexterity (Manuscript 3), all of which are relevant in dynamic environments (e.g., Breu et al., 2002; Good & Michel, 2013; Salmen & Festing, 2022).

In terms of the role of HRM for employee characteristics, the three manuscripts shed light on two HR systems and one TM practice: (1) Flexibility-promoting HR practices are suggested to support the development of employee agility in response to changing environmental demands, (2) talent sharing is investigated wherein talents take on boundary spanning activities to connect the home organisation with an external organisation and (3) HRM targeting ambidexterity is proposed to be associated with a climate for ambidexterity, which in turn is suggested to be linked to individual ambidexterity.

Figure 3 provides an overview of the thematic foci of the three manuscripts included in this dissertation.

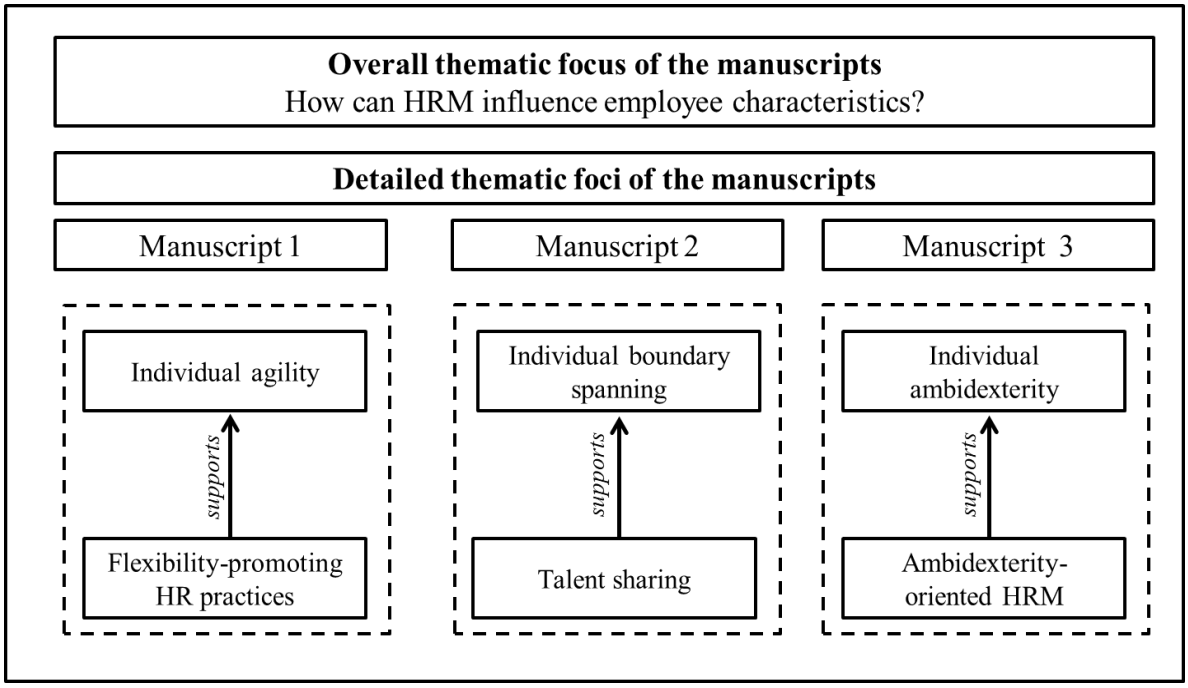

Figure 3: Overview of the thematic foci in the three manuscripts (Source: Own representation)

In terms of methodological approaches, three different methods were pursued, namely an SLR based on data gleaned from 60 articles and one doctoral dissertation in Manuscript 1, a qualitative method, comprising 21 semi-structured interviews in Manuscript 2, and a mixed methods design, with an explanatory design giving priority to a quantitative analysis, including two studies with N=359 and N=301, followed by a qualitative analysis in Manuscript 3. More detailed information on the manuscripts is presented in Table 2.

Number of manuscript	**1**	**2**	**3**
Title	Paving the way for progress in employee agility research: a systematic literature review and framework	Interorganizational collaboration in talent management: Gaining resources from talent sharing	The role of HRM in fostering an ambidextrous climate and individual ambidexterity: A paradox theory-based framework and empirical investigation
Research question(s)	• How is employee agility defined and operationalised? • Which theoretical considerations underpin the definition and measurement? • Which role does HRM play in promoting employee agility?	• How do organisations pursue talent sharing? • What are organisational outcomes? • How should organisations pursue talent sharing? • How can outcomes of talent sharing be explained when considering facilitating factors?	What is the role of an HRM system targeting the goal of ambidexterity in creating a climate for ambidexterity and individual ambidexterity?
Theoretical lens(es)	• Work-stressor framework • Dynamic P-E fit theory	Social capital theory	• HRM-climate considerations • Paradox theory
Data base / sample	60 peer-reviewed papers and one dissertation	21 talents and talent experts from different organisations involved in	Quantitative studies: • Study 1: 359 employees of a

		talent sharing activities	German consumer goods company • Study 2: 301 participants from an online panel provider Qualitative study: • 3 HR experts in senior positions and 1 business leader
Research method	SLR following the five-step approach as defined by Denyer and Tranfield (2009)	Qualitative approach conducting semi-structured interviews and analysing them according to Grounded Theory approach Gioia et al. (2013)	Mixed methods approach with an explanatory design: • Step 1: Quantitative approach conducting structural equation modelling with SPSS AMOS • Step 2: Qualitative approach conducting semi-structured interviews
Co-author(s)	Marion Festing	Marion Festing	Marion Festing Kerstin Alfes René Mauer
Journal	*International Journal of Human Resource Management*	*European Management Journal*	*German Journal of Human Resource Management*

Journal ranking (VHB 2024)	A	B	B
Status	Published 2021	Revise and resubmit	Revise and resubmit
Accepted for conference presentation	16th International Human Resource Conference, Paris (France) in June 2020 (cancelled due to Covid-19 pandemic)	• 10th EIASM Workshop on Talent Management (presented online) in October 2021 • 82nd Annual Meeting of the Academy of Management, Seattle (USA) in August 2022	16th International Human Resource Management Conference, London (UK) in June 2023

Table 2: Outline of the three research manuscripts (Source: Own representation)

3.2 Research objectives & theoretical lenses

This section provides information on which research objectives were pursued and which theoretical perspectives were applied in the different manuscripts. Further information on the three manuscripts is also provided in Table 2.

Manuscript 1. The first manuscript provides an SLR on the concept of employee agility. Especially, since 2019, employee agility has witnessed a considerable increase in attention by scholars. However, the research field still has major shortcomings, such as the absence of a uniform definition of the concept. Therefore, the objective of Manuscript 1 was to first synthesise what is already known about the phenomenon, thereby focusing on current conceptualisations, theoretical foundations, operationalisation and the role of HRM. Based on these findings, the second objective was to advance the research field by (1) developing a definition for the concept, (2) suggesting a theoretical framework that would explain employee agility and the role of HRM and (3) providing a comprehensive agenda for future research. The authors applied a dynamic perspective on P-E fit theory (Sylva et al., 2019) and Podsakoff et al.'s work-stressor model (2007) to pay tribute to the role of continuous alignment to job demands in dynamic environments.

Manuscript 2. This study focuses on talent sharing and associated boundary spanning activity of talents and outlines the importance of their social capital. Thus, this manuscript covered a relatively novel topic and novel perspective on talent and TM. Its objectives were descriptive, normative and explanatory by asking questions on how organisations apply talent sharing and which outcomes can be realised, how should talent sharing be designed and how can outcomes be explained when considering facilitating factors? Applying a social capital lens (Adler & Kwon, 2002) helped to explain the process of enhancing organisational resources that reside within individuals and thus require social interactions.

Manuscript 3. This paper presents a mixed methods study focusing on ambidexterity. More specifically, it aimed to investigate whether HRM can support the development of individual ambidexterity via creating an ambidextrous climate. The conceptual framework and hypotheses were developed based on the HRM-climate debate (Bowen & Ostroff, 2004) and paradox theory (Smith & Lewis, 2011). Considerations on this subject explained

how HRM messages can form a common understanding by employees of what behaviours are expected (Bowen & Ostroff, 2004). Furthermore, paradox theory helped to explain how opposing climates jointly create paradoxical tensions that stimulate individuals to become ambidextrous.

3.3 Philosophy of science, paradigms and research methods

"[…] The practice of social research does not exist in a vacuum, sealed off from philosophical […] debates" (Bryman & Bell, 2019, p. 3). In line with this quote, it is highly acknowledged that philosophical assumptions guide the decision for specific research methods (Bonache & Festing, 2020; Bryman & Bell, 2019; Döring & Bortz, 2016). The current section first presents a synopsis of three fundamental assumptions of the philosophy of science, corresponding research paradigms, methodological approaches and the role of theory. Second, it highlights the three different research methods pursued in the research manuscripts of this doctoral dissertation, and third, it provides transparency on which paradigms guided the research.

3.3.1 Normative, epistemological and ontological orientations

According to Döring and Bortz (2016), the philosophy of science is a branch of philosophy and deals mainly with questions on how knowledge can be gained and which constraints exist concerning knowledge development. Among others, it covers aspects of science centring around the characteristics of the subject/object under investigation, the nature of the methods applied and ethical considerations (Brühl, 2017; Döring & Bortz, 2016). Within the philosophy of science one can find normative, ontological and epistemological assumptions (Brühl, 2017). Normative assumptions include, for instance, the images of humankind on which research is based (Brühl, 2017). Epistemological and ontological assumptions entail various paradigms, understood as "a cluster of beliefs and assumptions, often unstated, that influence views on what should be studied, how research should be done, and how results should be interpreted" (Bryman & Bell, 2019, p. 407). In other words, when researchers follow a certain research paradigm, their work is fundamentally distinct compared to if they pursue another one (Bonache & Festing, 2020). The next part will present these aspects in more detail.

3.3.1.1 Epistemological orientations

Epistemology (Greek; "episteme" = knowledge; "logos" = science; Merriam-Webster, n.d.-a) deals with the question of how and, more specifically, with which methodological approaches knowledge about social reality can be gathered (Brühl, 2017; Bryman & Bell, 2019; Döring & Bortz, 2016). In this regard, researchers can adopt two opposing paradigms. The *positivist paradigm* follows the principles of natural science, claiming that phenomena need to be observable and measurable through numerical data (Bonache & Festing, 2020; Döring & Bortz, 2016). Knowledge, according to this perspective, is developed by testing empirical models and investigating the association between variables (Bonache & Festing, 2020). The researcher remains distant to the investigated context and focuses on facts (Bonache & Festing, 2020). This pays tribute to the requirement of value-neutrality,[3] meaning that a researcher's values and preconceived assumptions have minimal or no effect on the findings (Bryman & Bell, 2019; Döring & Bortz, 2016). As a consequence, replicability of the study results is possible (Bryman & Bell, 2019; Döring & Bortz, 2016).

In contrast, *the interpretivist paradigm* aims at gaining a profound understanding of phenomena as they are perceived by individuals in specific contexts (Bonache & Festing, 2020; Bryman & Bell, 2019). In order to achieve this, different ways of doing research are available, including ethnographic studies, conducting qualitative interviews, critical discourse analysis and participatory action research (Bryman & Bell, 2019). The responsibility of the researcher is to interpret and make sense out of these individual perceptions as depicted in the collected data (Bonache & Festing, 2020). When following an interpretivist position, researchers immerse in the research context, which helps them build relationships with and empathy for the cohort under investigation (Bonache & Festing, 2020; Bryman & Bell, 2019).

[3] Social science recognises that excluding values completely from the research process is an unrealistic endeavour. Instead, it is acknowledged that they influence the research process to some extent, for instance with regard to the choice of the research question, the selection of the methodology and the analysis and interpretation of the data (Bryman & Bell, 2019)

3.3.1.2 Ontological orientations

Ontology (Greek; “ont” = being; “logos” = science; Merriam-Webster, n.d.-c) addresses the question relating to what the nature of social reality is (Brühl, 2017; Döring & Bortz, 2016). In this context, on the one hand, there is the *objectivist paradigm*, stating that phenomena represent objectifiable facts or predefined objects that exist independently of the perception and the influence of social actors (Bryman & Bell, 2019). On the other hand, the *constructivist paradigm* posits that knowledge and reality are created by individuals and/or groups in a three-step process of social construction: externalisation (communicating knowledge to the external world), objectivation (transforming subjective to objective knowledge via wide adoption by society) and internalisation (incorporating knowledge into one’s reality) (Berger & Luckmann, 2003) . This process leads to the fact that social reality is neither objective in nature nor universally valid (Bryman & Bell, 2019; von Ameln, 2004).

3.3.1.3 Implications of research paradigms for selecting research methods and applying theory

Paradigms have a strong influence on how theories are applied and which research methods are selected (Bonache & Festing, 2020; Bryman & Bell, 2019; Döring & Bortz, 2016).

Concerning the role of theory, *positivists* and *objectivists* mainly follow *deductive* approaches (Bryman & Bell, 2019). Deduction involves making inferences by following principles and rules; in this regard, these principles and rules are applied to a specific phenomenon or problem to arrive at a conclusion in a logical way (Brühl, 2017). Researchers following deductive reasoning postulate hypotheses grounded in theories and which are tested and either supported or rejected on the basis of the collected data (Bryman & Bell, 2019). This allows for theory testing and is to be found in *quantitative research* (Döring & Bortz, 2016).

The role of theory for interpretivists and constructionists is either inductive or abductive (Bryman & Bell, 2019). Induction draws conclusions from specific observations to the general (Brühl, 2017; Döring & Bortz, 2016). In social science, researchers analyse

data and then find common patterns therein for the purpose of (further) developing theories (Bryman & Bell, 2019; Döring & Bortz, 2016). Abduction also starts with collecting data, but – in contrast to the inductive approach – its aim is to generate novel hypotheses that can explain rather surprising findings in the data structure (Brühl, 2017; Döring & Bortz, 2016). Both approaches are applied in qualitative research (Döring & Bortz, 2016).

Table 3, compiled from information gleaned from the contributions made by Bryman and Bell (2019), Kuckartz (2014) and Döring and Bortz (2016), presents the implications of research paradigms for selecting research methods, applying theory and the kind of inferences that can be made. However, as Kuckartz (2014) notes, it is important to keep in mind that this information is rather a simplification and outline only a tendency. In particular, the pure application of deduction and induction or abduction when pursuing a specific research method is considered unrealistic. For instance, qualitative research following an inductive or abductive approach to connect data with theory can be guided to some extent by the pre-existing theoretical knowledge of the researcher.

Furthermore, it is noteworthy that the paradigmatic orientation alone cannot influence the selection of a research methodology – it is also determined by the research question (Bryman & Bell, 2019).

Paradigms	**Positivism / objectivism**	**Interpretivism / constructionism**
Research method	Quantitative approach Positivist qualitative approach	Interpretivist qualitative approach
Role of theory	Primarily deductive (theory testing)	Primarily inductive and abductive (theory and hypothesis generating)
Applicability of findings	Generalisable for a population	Context-specific for a group

Table 3: Implications of paradigms for the selection of a research method, role of theory and applicability of findings (Source: Own representation based on Bryman & Bell, 2019; Döring & Bortz, 2016; Kuckartz, 2014).

3.3.2 Research methods and paradigmatic orientations of the three manuscripts

Overall, the authors of the manuscripts followed three different research methods, namely an SLR in Manuscript 1, a qualitative research approach in Manuscript 2 and a mixed-methods approach in Manuscript 3. Thus, different paradigmatic orientations were present in different research projects. In the following, this will be discussed in more depth.

3.3.2.1 Systematic literature review in Manuscript 1

Overview. In Manuscript 1, the authors carried out an SLR, i.e., "a research method and process for identifying and critically appraising relevant research, as well as for collecting and analyzing data from said research" (Snyder, 2019, p. 334). While traditionally SLRs were developed and applied in healthcare research, nowadays they are also widely applied by management scholars (Jesson et al., 2011; Snyder, 2019). In 2003, Tranfield and colleagues provided an important impetus for the application of SLRs in management research, in that they elaborated guidelines on how to perform SLRs in this research field (Tranfield et al., 2003). However, today, with the rise of AI and machine learning, researchers are questioning whether we will still see SLRs performed by humans in the future. In this regard, studies currently indicate that AI is quicker in conducting SLRs than humans (Atkinson, 2024).

Nonetheless, SLRs provide some important advantages, as they contribute to minimising biases in the research process, in that they establish "a replicable, scientific and transparent process […] and [provide] an audit trail of the reviewers decisions, procedures and conclusions" (Jesson et al., 2011; Pae, 2015; Tranfield et al., 2003, p. 209). This stands in contrast to traditional scoping reviews (also called 'narrative reviews' or 'descriptive reviews'), which have been criticised for being susceptible to researcher biases, including selection bias occurring when researchers choose only specific articles for their literature review. A widely applied approach to conducting SLRs was developed by Denyer and Tranfield (2009), comprising five steps that pay tribute to the key principles of replicability and transparency. These five steps include (1) formulating the research question, (2) locating the studies, (3) selecting and evaluating the studies, (4) analysing and synthesising the studies and (5) reporting and using the results (Denyer & Tranfield, 2009). Thus, it

becomes evident that SLRs differ considerably from traditional (scoping) reviews concerning not only how the review is conducted and presented, but also with regards to their aim and scope (see Table 4 for an overview).

	Traditional (scoping) review	**Systematic review**
Aim	To gain a broad understanding, and description of the field	Tightly specified aim and objectives with a specific review question
Scope	Big picture	Narrow focus
Planning the review	No defined path, allows for creativity and exploration	Transparent process and documented audit trail
Identifying studies	Searching is probing, moving from one study to another, following up leads	Rigorous and comprehensive search for ALL studies
Selection of studies	Purposive selection made by the reviewer	Predetermined criteria for including and excluding studies
Quality assessment	Based on the reviewer's opinion	Checklists to assess the methodological quality of studies
Analysis and synthesis	Discursive	In tabular format and short summary answers
Methodological report	Not necessarily given	Must be presented for transparency

Table 4: Comparison between traditional (scoping) review and SLR (Source: Jesson et al., 2011, p. 105)

Justification. Applying an SLR in Manuscript 1 was appropriate, as the aim of this study was to provide an encompassing synthesis of the current state of research with a tight focus on the phenomenon of employee agility, including its definitions, theoretical underpinning, operationalisation and the role of HRM. To this end, the authors attempted to include all relevant studies, which in turn enabled them to gain a more holistic overview.

Procedure & sample. For the specific case of Manuscript 1 the authors conducted the abovementioned approach defined by Denyer and Tranfield (2009). The results of this paper are based on secondary data, including 60 peer-reviewed academic papers and one doctoral dissertation, which were located following a database search in Business Source Complete and a manual search in Google Scholar with the help of a predefined search string. Moreover, the authors conducted searches in the reference list of identified articles for further relevant articles and in agility-oriented special issues. When screening each contribution, the authors concentrated on the main questions regarding how employee agility is understood, how theory substantiates construct definition and measurement, how the concept is operationalised and how HRM impacts employee agility. For more detailed information on the different steps conducted, please refer to the "Methodology" and "Appendix" sections in Manuscript 1.

Paradigmatic orientations. In terms of epistemological and ontological orientations, SLRs are not tied to specific paradigmatic orientations. Nevertheless, their methodological approach, which was initially developed for medical science, has been tailored to the management field (Snyder, 2019; Tranfield et al., 2003). Developing a "fit for-purpose systematic review methodology" (Denyer & Tranfield, 2009, p. 678) is especially important, as the guidelines need to reflect the epistemological and ontological orientations of the research field (Denyer & Tranfield, 2009). Durach et al. (2017) in this regard go one step further and suggest that SLR methodologies not only need to be adapted to the broader management field, but they also need to reflect the particularities and dominant paradigms of corresponding sub-disciplines, as "each discipline has idiosyncrasies in its research that influence the retrieval, selection, and synthesis of relevant literature" (Durach et al., 2017, p. 67). As a consequence, they claim to develop individual SLR guidelines for different disciplines. While Durach et al. (2017) follow this claim for the field of supply chain management – to the best of our knowledge – there is no approach that specifically adheres to the research paradigms in HRM.

Role of theory. Manuscript 1 follows an *inductive approach* in terms of data analysis. As the topic of employee agility is still underdeveloped, albeit widely researched, the authors could not refer to any pre-existing categories currently available in the literature which would allow them to pursue a deductive approach (see, for example, Andresen &

Bergdolt, 2017 pursuing a deductive approach in SLR). Thus, the authors, when exploring the material, stayed close to the data. In the aftermath, the authors generated a new understanding of the concept of employee agility, thus advancing theory by providing an explanation for the phenomenon and establishing construct clarity (Post et al., 2020).

3.3.2.2 Qualitative research in Manuscript 2

Overview. This manuscript is based on an explorative, qualitative research method that allows for a) describing and explaining a phenomenon under investigation with a high level of detail, and thus gaining profound insights, b) creating an understanding of a phenomenon in its specific context, c) developing concepts and theories based on the gathered data and d) focusing on processes outlining how aspects of social life change over the course of time (Bryman & Bell, 2019).

Justification. This research approach to explore talent sharing is adequate because of several reasons. First, talent sharing is a rather novel phenomenon and lacks not only a common definition and a theoretical underpinning, but also knowledge on its design, mechanisms and outcomes. Second, the study focuses on the process of resource transfer through talent sharing and its impact on organisations, specifically taking into account key facilitating factors and organisational outcomes. Finally, Manuscript 2 studies talent sharing in a specific context, namely dynamic environments. Qualitative research is especially suitable for understanding phenomena in specific contexts.

Procedure & sample. For data collection, the researchers prepared a semi-structured interview guideline reflecting open and text-generating questions (Dresing & Pehl, 2018) to pay tribute to the explorative nature of qualitative research. Potential interview candidates were identified based on defined criteria, thereby allowing for "select[ing] information-rich cases" (Bonache & Festing, 2020, p. 108) in the research field of talent sharing – a sampling technique referred to as 'purposeful sampling' (Flick, 2018). Interview candidates were identified by the researchers' networks, by search engines using the term 'talent sharing' and by following a snowballing system including recommendations made by interviewees on further talents and experts. This led to an overall 21 interviews with 13 talents and eight experts involved in talent sharing from organisations founded in Germany and Austria. The interviews lasted between 20 and 80

minutes, were conducted in English (one interview) and German (20 interviews) via Zoom[4] between June 2021 and March 2022 and recorded and transcribed. Afterwards, the interview transcripts were coded with the analysis software MAXQDA 2020, and the obtained information was reconfirmed and enlarged with internally and externally available documents, an approach considered as data triangulation (Flick, 2007). Following existing qualitative TM research (e.g., Harsch & Festing, 2020), the authors analysed the data according to the grounded theory approach (Gioia et al., 2013), which is widely acknowledged to foster accuracy in qualitative research and the credibility of results, in that it builds a comprehensible data structure composed of first-order concepts, second-order themes and aggregate dimensions (Bonache & Festing, 2020; Gioia et al., 2013).

Paradigmatic orientations. Manuscript 2 takes an *interpretivist stance* in terms of epistemology. Talent sharing is understood from the perspective of the people involved, namely talents and experts in their organisational contexts, with the help of qualitative data (Bonache & Festing, 2020; Bryman & Bell, 2019). Therefore, the collected data grasps a plurality of social realities of and meanings attributed to the phenomenon of talent sharing as held by interview participants, including, for instance, their subjective views on important facilitating factors and outcomes of talent sharing. For the interpretation and sensemaking of collected data in data analysis, the grounded theory approach is applied. This displays a strong interpretivist orientation, as it engages in inductive theory development by detecting common themes in the data (Bonache & Festing, 2020; Gioia et al., 2013). Furthermore, in interpretivist studies, context is a crucial influencing factor on social phenomena. Concerning *ontological considerations*, Manuscript 2 can be categorised as *constructivist*. It captures the social reality of talents and talent experts by asking for their perceptions concerning important facilitating factors and outcomes of talent sharing. As such, the researchers capture what interviewees experience with regards to talent sharing, such as how they perceive the design of talent sharing, what factors they consider to be beneficial and what can be improved. As such, the presented results reflect the view of interview participants on the social reality of talent sharing.

Role of theory. Manuscript 2 follows an *inductive approach*, which involves data collection and/or analysis as a first step, while in a second step the researchers generate or

[4] Due to pandemic crisis, it was not possible to conduct face-to-face interviews

advance a theory and/or concepts on the basis of the data ((Bryman & Bell, 2019). As such, theories and/or concepts represent the results of inductive studies. In Manuscript 2, the grounded theory methodology is followed and aims at "[...] building a vibrant inductive model that is grounded in the data" (Gioia et al., 2013, p. 22). In line with this approach, the knowledge gained in this research project is rooted in information provided by interview participants. The researchers engaged in an open coding process characterised by strong proximity to the interview data and resulting in informant-centred first-order concepts which represent "the building blocks of theory" (Strauss & Corbin, 1990, p. 101). While in this first data-driven step of analysis researchers do not consider pre-existing theories or concepts (Gioia et al., 2013), in the second step the first-order concepts are considered from a theoretical perspective and organised in theory-centred second-order themes (Gioia et al., 2013). By doing so, researchers are able to find or derive novel concepts and theories that are rooted in informants' data (Gioia et al., 2013). For the case of Manuscript 2, the researchers were able to develop propositions and a theoretical framework explaining the design, facilitating factors and outcomes of talent sharing – all of which arise out of and are grounded in the collected data.

3.3.2.3 Mixed methods approach in Manuscript 3

Overview. In Manuscript 3, the authors followed a mixed methods approach, understood as "research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches of methods in a single study or program of inquiry" (Tashakkori & Creswell, 2007, p. 4). Advocates of the mixed methods approach suggest that its overall advantage consists of capitalising on the strengths of each research method while compensating for its weaknesses. Important characteristics of mixed methods approaches include (1) both quantitative and qualitative data are gathered and analysed with rigour, (2) both types of collected data are used either in sequence, by building on each other or integrating them into each other, referred to as "sequential design" (Creswell & Plano Clark, 2011, p. 81), or simultaneously by combining one with the other, named as "parallel design" (Creswell & Plano Clark, 2011, p. 77), (3) prioritization is granted either to one or both data types (Creswell & Plano Clark, 2011). There are different situations in which a mixed methods approach is required for addressing a research problem (Creswell & Plano Clark, 2011):

First, obtaining data from one single source can be inadequate, as quantitative and qualitative approaches each offer a specific perspective on a phenomenon. Combining both approaches, however, assists the researcher in giving a more comprehensive answer to the research question as opposed to using one approach alone. Second, it may be necessary to provide an explanation for the findings of a first study if they do not adequately answer the research question or if results are unanticipated. Typically for this 'explanatory approach', quantitative findings are enriched by qualitative data, as these can provide important explanations as to why associations between phenomena do or do not exist. Third, another motivation for using mixed methods represents the need to generalise the results of a qualitative study. In this case, qualitative analysis is conducted to explore a specific phenomenon, clarifying which variables and theories are relevant in this context, also referred to as the 'exploratory approach'. These findings can then be further analysed via a quantitative study establishing generalisability. Fourth, it might be necessary to integrate another research method into a study in order to obtain deeper insights into some research stages. In this regard, qualitative data can be embedded into a quantitative study or vice versa. As outlined, there are different ways of conducting mixed methods research. As the "explanatory sequential design" (Creswell & Plano Clark, 2011, p. 81) is the one applied in Manuscript 3, the doctoral dissertation will dive deeper into this option. This approach initially gathers and analyses quantitative data, followed by qualitative data. In this regard, the qualitative study is based on the quantitative, which is prioritised (Creswell & Plano Clark, 2011; Kuckartz, 2014). Overall, this design aims at explaining the quantitative findings with qualitative data. More specifically, it enables researchers to explain non-significant or unanticipated findings obtained in the quantitative research phase with additional qualitative data (Creswell & Plano Clark, 2011). As Kuckartz (2014) aptly states: "The aim is not to simply find out additional information, but to fill the explanatory gaps left by the quantitative study" (p. 78).[5] Creswell and Plano Clark (2011) suggest a four-step procedure to pursue sequential explanatory designs: (1) Drafting and implementing the quantitative research stage, (2) applying strategies to follow up quantitative findings (e.g., deciding which findings should be explained, which questions should be answered, which sample is adequate and how data will be collected), (3) drafting

[5] The original quote is in German and has been translated from German to English; original quote: „Man will nicht einfach nur Ergänzendes erfahren, sondern ganz gezielt die Erklärungslücken füllen, die die quantitative Studie hinterlassen hat" (Kuckartz, 2014, p. 78).

and implementing the qualitative research stage and (4) interpreting the findings of both research stages and then clarifying the explanatory value of the qualitative findings for the quantitative study.

Justification. The explanatory sequential design was suitable for our study finding in the quantitative phase that the hypothesised association between some of the variables in our model was not significant, thus representing an unanticipated finding, which required further explanation with the help of qualitative data.

Procedure & sample. For the specific case of Manuscript 3, the authors followed the four-step procedure suggested by Creswell and Plano Clark (2011) as described above. A quantitative approach (step 1) was followed based on two independent studies with sample sizes of N = 359 and N = 301. The non-significant results obtained led us to collect further qualitative data (steps 2 and 3) from knowledgeable interview partners imparting rich and deep information concerning the question of interest. Thus, purposeful sampling was applied (Flick, 2018). Finally, in the discussion, the study established the link between the quantitative and qualitative results (step 4), finding explanations as to why the association between variables was not found and which further factors might be required to establish this association. For further details on the methodological approach and the integration of the quantitative and qualitative findings, see the methods and discussion sections in Manuscript 3.

Paradigmatic orientations. Mixed methods approaches have been criticised for their integration of quantitative and qualitative research methods, which are firmly grounded in specific ontological and epistemological orientations. Some researchers argue that these orientations involve irreconcilable research paradigms, which cannot be combined in one study (i.e., a study cannot be grounded simultaneously in a positivist and an interpretivist orientation (epistemology) and an objectivist and a constructionist orientation (ontology) (Bryman & Bell, 2019). In contrast, mixed methods researchers take over the world view of *pragmatism*, which is not a paradigm in itself but a world view focusing on pluralism and a practical orientation towards research (Creswell & Plano Clark, 2011; Kuckartz, 2014). This implies the application of approaches that are best suited to solving a research problem (Creswell & Plano Clark, 2011). As such, mixed methods researchers call for

abolishing the imposed choice between different epistemological and ontological orientations (Creswell & Plano Clark, 2011). Instead, they advocate a "paradigm pluralism, or the belief that a variety of paradigms may serve as the underlying philosophy for the use of mixed methods" (Teddlie & Tashakkori, 2011, p. 287). Thus, in terms of research methods the mixed methods community adopts a compatibility assumption, meaning that they regard research methods as compatible and their simultaneous application as a vehicle to gain multiple perspectives on a phenomenon (Bryman & Bell, 2019; Creswell & Plano Clark, 2011; Kuckartz, 2014). The primary decisive factor for selecting a research method or a combination of methods is the extent to which this helps answer the research question, thereby suggesting a strong focus on practicality instead of on epistemological and ontological paradigms (Creswell & Plano Clark, 2011; Kuckartz, 2014). Thus, mixed methods researchers select and mix methods in a way that is most useful for obtaining the most insightful findings about a phenomenon (Kuckartz, 2014). In this regard, Johnson and Christensen (2014) state: "In short, what works is what is useful and should be used, regardless of any philosophical assumption, or any other type of assumption" (p. 491). As such, Manuscript 3 takes on a pragmatic orientation, whereby different epistemological and ontological orientations are represented in one study. The first step of the study with its quantitative design has a positivist and an objectivist stance, while the second step (consisting of a qualitative design) is coined by interpretivist and constructivist positions.

Role of theory. As Manuscript 3 gives priority to the quantitative study, a deductive approach is mainly pursued. As such, in the first step, the authors postulate three hypotheses based on theoretical considerations. Based on the data, two hypotheses were supported while one was rejected. In addition, the manuscript also shows some inductive elements, as a qualitative approach was adopted in the second phase. The researchers pursued an open coding process which was closely tied to the data provided by the interview participant. The findings were explained with the JD-R theory.

Table 5 provides an overview of the different paradigmatic orientations and the role of theory in the manuscripts.

Manuscript **Method applied**	**1** **SLR**	**2** **Qualitative Research**	**3** **Mixed Methods Research (Sequential explanatory design)**
Epistemological orientation	-	Interpretivist	Step 1: Positivist Step 2: Interpretivist
Ontological orientation	-	Constructivist	Step 1: Objectivist Step 2: Constructivist
Role of theory	Inductive	Inductive	Mainly deductive with some inductive elements

Table 5: Paradigmatic orientations and the role of theory in the manuscripts (Source: Own representation adapted from Bryman and Bell (2019)

4 RESEARCH MANUSCRIPTS

4.1 Manuscript 1: Paving the way for progress in employee agility research: a systematic literature review and framework

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Status of the manuscript: Published

Salmen, K., & Festing, M. (2022). Paving the way for progress in employee agility research: a systematic literature review and framework. *The International Journal of Human Resource Management*, *33*(22), 4386-4439.

DOI: 10.1080/09585192.2021.1943491

4.2 Manuscript 2: Interorganizational collaboration in talent management: Gaining resources from talent sharing

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Status of the manuscript: Revise and resubmit

Salmen, K., & Festing, M. (2023). Interorganizational collaboration in talent management: Gaining resources from talent sharing

Available upon request.

4.3 Manuscript 3: The role of HRM in fostering an ambidextrous climate and individual ambidexterity: A paradox theory-based framework and empirical investigation

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Status of the manuscript: Revise and resubmit

Salmen, K., Festing, M., Alfes, K. & Mauer, R. (2023). The role of HRM in fostering an ambidextrous climate and individual ambidexterity: A paradox theory-based framework and empirical investigation

Available upon request.

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5 DISCUSSION

This doctoral dissertation concentrates on the overall research question how HRM can influence NWW in dynamic environments. For this purpose, two subordinate research questions are posed. The first one aims at answering how HRM can influence specific employee characteristics (i.e., individual agility, individual boundary spanning roles and individual ambidexterity), while the second one builds on this and seeks to answer how the investigated employee characteristics can contribute to NWW. The first subordinate research question was addressed in the three manuscripts. The main findings, alongside contributions, are presented in the following section. To answer the second subordinate research question, further analyses were conducted, thereby moving beyond the results of the individual manuscripts. In the second sub-chapter of this discussion, a framework is presented which integrates the results of the analysis. Moreover, this discussion also presents contributions beyond the ones made for each manuscript, outlines limitations based on methodological and theoretical reflections, suggests avenues for future research and, finally, elaborates practical recommendations for organisations, HRM and individuals alike.

5.1 Summary of the key findings of the manuscripts and respective contributions

As outlined above, each manuscript examines the role of HRM for employee characteristics. In line with the HR ecosystems perspective (Snell & Morris, 2021), the manuscripts focus on tailored HR practices and systems that are aligned to the dynamic environment and which foster organisational flexibility and adaptability via its influence on employee characteristics. More specifically, they focus on the role of flexibility-promoting HR practices for fostering individual agility, talent sharing contributing to individual boundary spanning and ambidexterity-oriented HRM for promoting individual ambidexterity. In the following, the main results and contributions are briefly outlined. Further details can be found in the manuscripts.

5.1.1 Flexibility-promoting HR practices and individual agility

In the first manuscript, consideration was given to flexibility-promoting HR practices (Ketkar & Sett, 2009) and individual agility. The findings indicate that flexibility-

promoting HR practices can foster employee agility in a context of high job demands. Agile individuals are required to adapt continuously to the demands arising from a dynamic environment through learning and innovative behaviour. It is suggested that the practices included in flexibility-promoting HR practices create an organisational climate (Bowen & Ostroff, 2004) which in turn encourages individual learning and innovation and thus contributes to individual alignment. For example, the specific practices of job rotation and job counselling favour learning, thereby addressing the strong need to develop new skills. In addition, information-sharing practices trigger participation and thus help in exploring new opportunities, generating ideas and partaking in innovative activities.

Besides these HR-related findings, this manuscript also investigated the current body of research published on the phenomenon of employee agility and identified shortcomings. As an answer, it generated novel knowledge in the form of defining the phenomenon and providing a framework to explain it. This piece provides three contributions. First, it systematically compiles an overview of the status quo of the research field by synthesising how the construct is currently defined and measured and what role HR plays as an antecedent in existing research. Second, based on theoretical considerations, it (1) develops a novel framework explaining employee agility and (2) suggests a new definition. Third, the authors provide avenues for future studies, which contribute to developing this research field further.

5.1.2 Talent sharing and individual boundary spanning

The second manuscript investigated the phenomenon of talent sharing and individual . The authors explored the specific organisational outcomes of talent sharing and how these can be achieved with the help of facilitating factors. Overall, the investigation was able to confirm that talent sharing allows organisations to enhance their resources, including the augmentation of human capital and the further development of cultural values. Facilitating factors, which are related to social capital on an organisational and an individual level, support this process. In terms of talent sharing outcomes, it is remarkable that the authors found indications in the empirical data that talent sharing and individual boundary spanning is related and can even contribute to NWW. As indicated in Figure 4 interviewees outlined the importance of talent sharing in expanding knowledge on agile

methods, such as design thinking, Scrum and sprints and technologies used to build digital business models, which has been identified as one driver for NWW (see Chapter 2.2). Furthermore, cultural values which were brought to the home organisation centre around autonomy and participation, intrapreneurship, flat hierarchies and collaboration based on iterative approaches, all of which play a role for NWW.

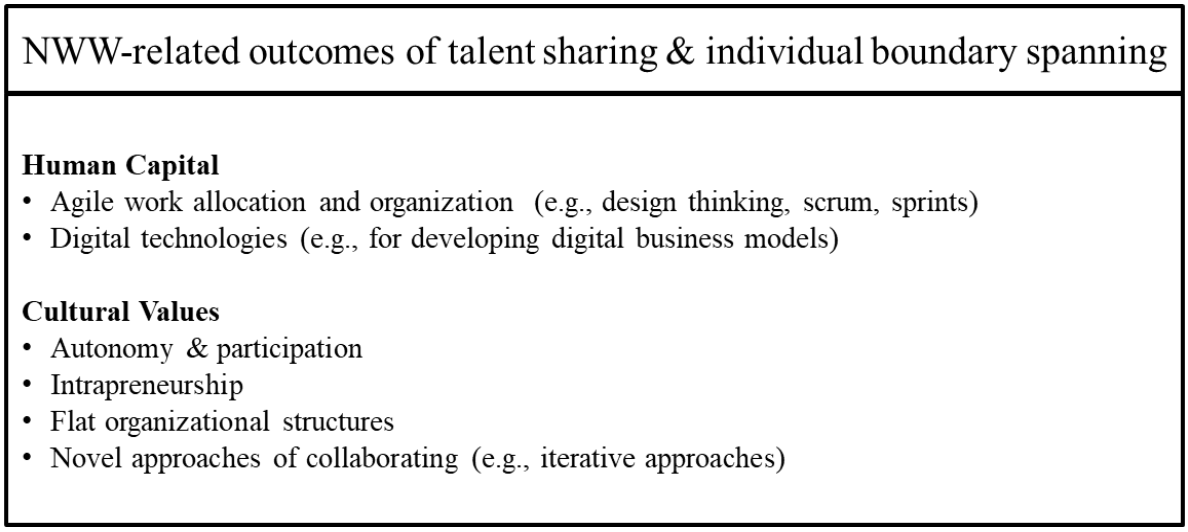

Figure 4: NWW-related outcomes of talent sharing identified in Manuscript 2 (Source: Own representation based on Manuscript 2)

In addition, based on the findings and social capital theory, the manuscript develops a framework that concentrates on the abovementioned outcomes and facilitating factors. Three contributions are provided. First, the paper contributes to the debate on "shifting the boundaries of talent management" (Vaiman et al., 2021, p. 253), in that it concentrates on a specific endeavour in TM whereby talents cross organisational boundaries to gain and transfer valuable resources. Second, the authors provide a framework focusing on facilitating factors and outcomes of talent sharing, thereby developing an in depth-understanding of what practitioners need to consider when applying this approach. Furthermore, developed propositions and a future research agenda pave the way for further scholarly investigation of this phenomenon. Third, the authors advance (1) social capital theory, in that they identify concrete mechanisms explaining how social capital supports organisational resource enhancement, and (2) the research stream of interorganisational collaboration, outlining the powerful role of talents and TM in this regard.

5.1.3 Ambidexterity-oriented HRM and individual ambidexterity

The third manuscript considers individual ambidexterity and ambidexterity-oriented HRM. More specifically, the authors investigated the role of HRM practices that are tailored in such a way that they address both dimensions of ambidexterity, namely exploitation and exploration. These include, for example, compliance-based practices, productivity bonuses and performance management steered towards optimisation, as well as practices with a strong focus on learning ability, such as job rotation. The empirical investigation indicates that ambidexterity-oriented HRM contributes to an ambidextrous climate. A surprising result was that the ambidextrous climate is not associated with individual ambidexterity, which is contrary to theory-based assumptions. A qualitative exploration aimed at understanding and explaining this finding in more depth. The data was able to show the adverse effects of an ambidextrous climate on individuals, including resignation, overload, exhaustion and stress. At the same time, the data also revealed that specific factors, including individual characteristics and organisational and leadership aspects, can help counterbalance these negative effects. The contributions of this manuscript are threefold. First, the authors develop and test a framework based on the HRM-climate debate and paradox theory and centres on the link between HRM, climate for ambidexterity and individual ambidexterity. Furthermore, the authors identify concrete balancing factors that help individuals balance the adverse effects of tensions. Second, our study contributes to developing the HRM-climate debate further by showcasing that not only can two climates coexist, but also that this climate can convey inconsistent messages, which stands in contrast to claims for consistency in this field (Bowen & Ostroff, 2004). Third, the authors take the ambidexterity field one step further by showing that an ambidextrous climate can be created by HRM systems addressing exploration and exploitation.

5.2 Further Analysis

Having summarised the key role of HRM for employee characteristics in the previous section, in the following this work conducts a further analysis and delves into the roles of individual agility, boundary spanning and ambidexterity for NWW. In this regard, it is suggested that these employee characteristics drive the shift towards NWW in terms of speed, spread and depth (Alfes et al., 2022). Furthermore, based on theoretical

considerations of open systems theory (Scott & Davis, 2006), it is also suggested that NWW represent one vehicle for organisations to align with the dynamic environment. The results of the manuscript and further considerations are compiled in an integrative framework (see Figure 5).

5.2.1 The role of employee characteristics for NWW

There are initial hints in research that employees play a key role with regards to NWW (Breu et al., 2002; Helmold, 2021; Hesselbarth et al., 2024). In addition, empirical results, especially concerning talent sharing (Manuscript 2), even suggest that employees as boundary spanners contribute to the transformation towards NWW in that they deliver related knowledge and values to the organization (see Figure 4). This work takes these indications as starting point to elaborate more on the question how employee characteristics contribute to NWW. Prior to this step, a common understanding of the characteristics is briefly presented.

Individual agility consists of abilities and behaviours that enable employees to engage in fast learning across experiences and implement novel ideas quickly in an organisation (Salmen & Festing, 2022). Individual boundary spanners are intermediaries between various organisations, bringing fresh ideas and thereby enabling resource enhancement in the form of expanded human capital and altered cultural values in the home organization (see Manuscript 2). Ambidexterity on the individual level is defined as behaviours focused on two key areas: exploitation (i.e., generation of innovation and ideas through skills development and adaptation) and exploration (i.e., improvement of products by leveraging available skills) (Caniëls & Veld, 2019). The current research suggests that these employee characteristics contribute to the transformation towards NWW, as they enable speed, spread and depth of change (Alfes et al., 2022). This notion is presented in more depth in the following.

Influence on speed. Among the individual characteristics examined in the manuscripts, fast learning, idea generation and innovation are of central importance. These activities help individuals to react quickly to market changes and develop new ideas to meet them. For instance, agile employees are fast learners, which helps them find solutions quickly to new environmental challenges (Salmen & Festing, 2022). Boundary spanners help

organisations tap into fresh resources that are located beyond the organisational boundaries and thus enable relatively quick access to new approaches, such as those associated with NWW (see Manuscript 2). The same is true for ambidextrous employees, who explore new opportunities within and beyond organisational boundaries (Festing & Schäfer, 2022). In addition, ambidextrous individuals perform not only innovation-related, but also efficiency-related activities that can help in adapting existing approaches to NWW more quickly.

Influence on spread. As outlined above, innovation activities are inherently linked to the individual characteristics of agility, boundary spanning and ambidexterity. In this context, employees rely on sponsors who support their ideas and can disseminate them within the organisation (De Jong & Den Hartog, 2010). This is the case, for example, with individual boundary spanning in the context of talent sharing, where supervisors and top management are involved in rolling out the insights of talent sharing within the organisation. By searching for multipliers of change, which forms part of innovation activities, a higher degree of penetration of NWW within the organisation can be reached. Another way of achieving this is by considering employees with the above-mentioned characteristics as talents themselves. This is especially the case, for example, with employees who participate in talent sharing (see Manuscript 2) but it also applies to agile employees who are often required in positions that have high job demands, which may be assigned to talented employees (Salmen & Festing, 2022). Since talents occupy strategic positions in companies with high value creation potential, they themselves can have a major impact on organisations and/or sub-units (Collings & Mellahi, 2009) and can thus increase the spread of NWW.

Influence on depth. The investigated characteristics in the manuscripts can increase in several ways the degree to which workplaces and employees are affected by transformations. First, agile individuals learn on an ongoing basis and thus continuously transfer lessons learned to the organisational context (Salmen & Festing, 2022). These new stimuli flowing continuously into the organisation can trigger profound changes, such as those associated with NWW. Second, boundary spanners have been shown in our research to have a far-reaching influence on the organisations and, more specifically, affect its very core (see Manuscript 2). Moreover, the research in Manuscript 2 in this regard has shown

that this cohort brings with it new cultural values that are partly associated with NWW (e.g., autonomy, participation, flat hierarchies, iteration). These have an impact on how employees are led, work, collaborate and communicate with each other and thus fuel in-depth changes. Third, ambidextrous individuals work in settings that are characterised by a focus on both exploration and exploitation (Caniëls & Veld, 2019). With their strong emphasis on innovation and learning, these employees can bring new stimuli in the form of NWW to established, more exploitation-oriented contexts.

Summarising, these considerations suggest that individual agility, boundary spanning and ambidexterity contribute to the transformation towards NWW by enabling speed, spread and depth.

Based on an open systems perspective, the next section examines the role of NWW in meeting the requirements of a dynamic environment.

5.2.2 The role of NWW in a dynamic environment from an open systems perspective

In line with Hesselbarth et al. (2024), this doctoral dissertation argues that an open systems perspective (Scott & Davis, 2006) is a valuable lens through which to explain the emergence of NWW. This perspective emphasises that organisations are open systems that are marked by specific characteristics (Harney & Dundon, 2006; Pina e Cunha & Vieira da Cunha, 2006): They are open to the environment (i.e., they are interconnected to and influenced by it) and they dispose of system features (i.e., they have interdependent elements, and a shift in one element leads to a shift in another). In this context, it is particularly noteworthy that developments in the external environment have a major influence on the organisation's internal system (Harney & Dundon, 2006; Pina e Cunha & Vieira da Cunha, 2006). Thus, organisations need to be flexible and adaptable with regards to elements of their internal system to meet the requirements of the external environment (Englehardt & Simmons, 2002; Hesselbarth et al., 2024; Pina e Cunha & Vieira da Cunha, 2006).

This idea is even more relevant for organisations operating in an environment characterised by high levels of dynamism, due to emerging megatrends and disruptive

forces (see Chapter 2.2) (Englehardt & Simmons, 2002; Hesselbarth et al., 2024; Mithani, 2020), as they have an even higher need to implement elements in their internal systems that help them remain flexible and adaptable on a continuous basis (Mithani, 2020; Pina e Cunha & Vieira da Cunha, 2006). And indeed, it has been shown that organisational flexibility is associated with higher levels of innovativeness (Saeed et al., 2022) as well as performance and competitiveness (Yousaf & Majid, 2018), all of which are crucial in dynamic environments (Mithani, 2020; Pina e Cunha & Vieira da Cunha, 2006).

One internal element that can make a major contribution to organisational flexibility and adaptability is the way in which work is organised and performed (Hesselbarth et al., 2024; Pina e Cunha & Vieira da Cunha, 2006). In contrast to traditional approaches to work, which are for example characterised by higher degrees of inflexibility and hierarchies (see Chapter 2.1.1), NWW can help organisations build much-needed organisational flexibility and adaptability in dynamic environments in several ways (Englehardt & Simmons, 2002; Hesselbarth et al., 2024). Under NWW, employees are given more autonomy, participation and empowerment, allowing decisions to be made faster and organisations to respond quickly to market challenges (Pina e Cunha & Vieira da Cunha, 2006). In addition, the increasing focus on working in networks can help generate fresh ideas and innovative approaches, such as how organisations can meet changing market requirements (Martínez-Costa et al., 2019). The strong drive towards experimentation and learning in NWW contexts enables organisations to build new competences required to exploit new opportunities in a dynamic market (O'Reilly & Tushman, 2008; Salmen & Festing, 2022). These are only a few examples outlining how NWW contribute to meeting the demands of a dynamic environment.

As a next step, an integrative framework is developed which compiles the aforementioned results.

5.2.3 Integrative framework on New Ways of Working and the role of HRM and employee characteristics

Having outlined the basic assumptions of the open systems perspective and its relevance for NWW, the following section dives deeper into the framework (see Figure 5). This framework aims to integrate the insights of this doctoral dissertation. As such, it

illustrates that (1) HRM can influence NWW via supporting employee characteristics that contribute to NWW and (2) that NWW represent a vehicle to address the requirements of a dynamic environment.

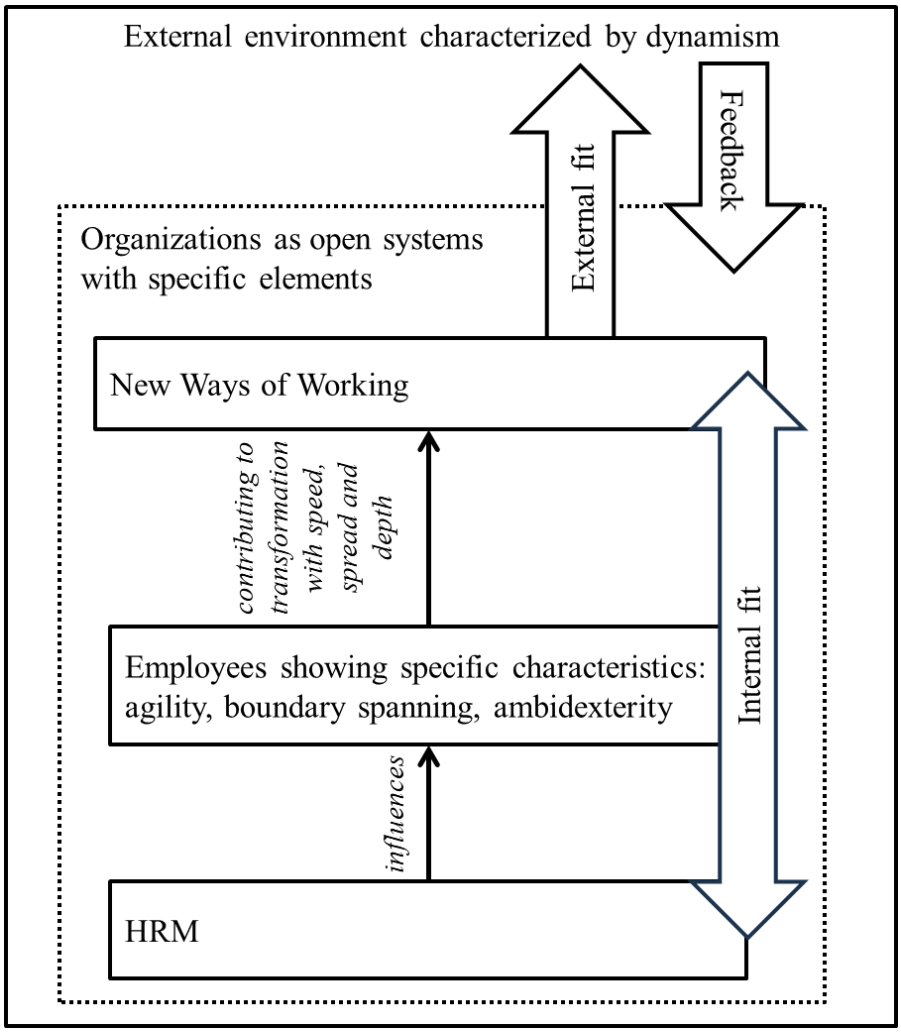

Figure 5: Integrative framework covering HRM, employee characteristics, NWW and the dynamic environment (with dotted lines representing the permeability of organisations) (Source: Own representation)

In the framework, HRM, employees and NWW are to be found in a dotted box, representing one specific part of the internal system of the organisation, which is nested in the external environment and interacts with it (Teece, 2018). In line with Hesselbarth et al. (2024) and the open systems perspective, congruence among elements of the internal system, and among the internal system and the external environment, is key (Teece, 2018).

In this regard, internal fit between HRM, employees and NWW, as indicated by the double arrow, means that these elements are coherent and support one another (Hesselbarth et al., 2024). External fit, demonstrated by the arrow directed towards the environment, ensures that NWW enable organisations to be flexible and adaptable – and therefore meet external requirements (Hesselbarth et al., 2024). Feedback from the environment, as indicated by the arrow directed towards the organisation, includes the inflow of information about external developments and thus forms the basis for a corresponding adjustment of the internal system; (Scott & Davis, 2006; Teece, 2018). For the specific case of dynamic environments, it can be observed that these developments take place at high pace and with great scope, so that the internal organisational system is required to adapt continuously (Mithani, 2020). This ultimately results in the fact that NWW are a constant transformation process characterised by high velocity, scope and depth, as defined by Alfes et al. (2022).

5.3 Overall contribution of the doctoral dissertation

The following section sheds light on the overall contribution of this doctoral dissertation after having presented manuscript-specific contributions in Chapter 5.1.

First, with its focus on employee characteristics (i.e., individual agility, individual boundary spanning and individual ambidexterity) that are relevant in dynamic environments, this research specifically provides an in-depth understanding of the phenomena and how they can be supported by HRM. The authors of the manuscripts not only engage in important groundwork, establishing construct clarity and suggesting a theoretical framework in Manuscript 1, but they also empirically assess important antecedents and outcomes of the abovementioned employee characteristics, as depicted in Manuscripts 2 and 3. Moreover, Manuscripts 1 and 2 focus especially on the underdeveloped phenomena of individual agility and individual boundary spanning related to talent sharing, thereby profoundly developing novel knowledge. As a result, this work provides important indications relating to how employees can be shaped towards outcomes that are relevant in dynamic environments.

Second, through the lens of the HR ecosystems perspective, this work focuses on the value of HRM (i.e., flexibility-promoting HR practices, talent sharing and ambidexterity-oriented HRM) that is tailored to a dynamic organisational ecosystem. Thus, instead of

applying proxies to measure HRM, it sheds light on practices and systems that specifically address the particularities of the context.

Third, this work not only emphasises the influence of HRM on employee characteristics as covered in the three manuscripts, but it also sheds light on the related concept of NWW. Concerning NWW, the model is examined in how far employee characteristics contribute to the transformation towards it and in how far it, in turn, helps meet the requirements of a dynamic environment. Arguments concerning the latter are based on considerations from an open systems perspective (Scott & Davis, 2006), which is in line with recent research in the field (Hesselbarth et al., 2024). As a result, an integrative framework is developed which compiles findings of the manuscripts and includes further insights gleaned from a further analysis of NWW. Thereby, this work moves beyond the key findings of the manuscripts.

Fourth, this dissertation not only offers in-depth insights into three employee characteristics, but it also provides an encompassing synthesis of the NWW research field by providing a deep understanding and describing a number of driving forces and the role of HRM. In this way, this dissertation illustrates the current state of research and helps identify research gaps. The latter in turn leads to the development of a thorough future research agenda that forms a springboard for expanding knowledge in this field and which will be presented in the upcoming chapter.

Overall, this research delivers a better understanding of the role of HRM and employee characteristics for NWW. More specifically, it contributes to advancing knowledge further by (1) creating a better understanding of employee characteristics that are relevant in a dynamic environment, (2) examining the role of three HRM practices and systems in relation to these employee characteristics, (3) suggesting a framework linking the findings on HRM and employee characteristics with NWW and (4) developing a broad synthesis of the NWW research field and thereby identifying avenues for future studies.

5.4 Limitations and future research avenues

Both this doctoral dissertation and the related NWW research field have some limitations. Based on these reflections, future research avenues are now suggested.

5.4.1 Methodological reflections

Validate conceptual frameworks. First, in Manuscript 1, the authors conduct an SLR, which represents a conceptual investigation. Conceptual studies yield great value, for example for theory advancement, in that they identify new perspectives on a phenomenon, analyse existing assumptions, establish construct clarity and/or define boundary conditions (Post et al., 2020). For the specific case of Manuscript 1, the authors advance theory by establishing construct clarity and developing a framework to explain employee agility. Furthermore, the integrative framework (see Figure 5) developed in this doctoral dissertation is in parts conceptual in nature. Also, many studies covering NWW are conceptual (e.g., Alfes et al., 2022; Ashford et al., 2018; Festing & Schäfer, 2022; Hesselbarth et al., 2024; Kotera & Vione, 2020; Reiche, 2023; Renard et al., 2021; Spreitzer et al., 2017). While these contributions have many strengths, conceptual studies also come with the key limitation that they do not collect data. Thus, aspects such as frameworks and suggested propositions are not empirically tested, and further validation is therefore required by subsequent studies. Hence, future research could empirically test existing frameworks, for example the one developed in his doctoral dissertation, and propositions in the field of NWW.

Apply alternative study designs. Second, with regards to the quantitative analysis of Manuscript 3 pursuing a mixed methods approach, the authors aimed to minimise the likelihood of common method bias by assessing predictor and outcome variables at different points of time (Podsakoff et al., 2012). Nonetheless, the authors cannot ensure that the responses were not affected by any further factors that led to inflated values of the stated coefficients (Temme et al., 2009). Furthermore, based on the statistical assessment, this study cannot make any causal conclusions regarding whether the hypothesised predictor variable HRM results in a climate for ambidexterity or whether there is reverse causality. Although in Manuscript 3 we selected relevant control variables based on theoretical considerations, the authors cannot guarantee that further variables that have not been assessed could have distorted the causal interpretations of the study (i.e., confounder variables). The presented limitations are an issue that can be frequently observed in NWW research and related fields, as to date a high amount of quantitative studies have a cross-sectional research design (e.g., Drazic & Schermuly, 2024; Junni et al., 2013; Prieto-Pastor

& Martin-Perez, 2015), leading to the abovementioned problem with endogeneity (Antonakis et al., 2010). One way to solve these issues is randomised experiments, also appreciated as a "failsafe way to generate causal evidence" (Antonakis et al., 2010, p. 1086). However, as randomised experiments are not always possible in the social sciences, researchers can also draw on instrumental-variable designs or difference-in-differences designs (Antonakis et al., 2010; Lonati et al., 2018). Future research in the field of NWW could move more into the direction of these study designs. For instance, for gig working, the effects of monitoring by algorithms (manipulation) for employee wellbeing (outcome) could be investigated by manipulating one group while the control group remains stable. If this is not possible, it is suggested to follow recent recommendations to make causal inferences (Antonakis et al., 2010; Lonati et al., 2018).

Conduct multi-disciplinary research. Third, the research in the manuscripts, as well as the related field of NWW, is characterised mainly by mono-disciplinary approaches, thus taking a strong HRM and business perspective on the topics. This is an issue, as "the reality of […] business is that organizational challenges are rarely solved by only looking at the problem from one perspective" (Farndale et al., 2017, p. 1633) – and this might be even more true for contexts associated with high levels of environmental uncertainty creating high intensity challenges. Therefore, the study field could benefit from interdisciplinary research that sheds light on the phenomenon and associated aspects from fresh theoretical perspectives. One such example is the study by Laureiro-Martínez et al. (2015), in which the authors investigate individual ambidexterity from a neuroscience perspective and find that exploitation and exploration trigger two different brain regions and thus require high cognitive capacity and attention. As the brain shows high levels of neuroplasticity, their conclusion for HRM is to invest in training that stimulates the activation of different cerebral regions. Furthermore, Bruch and colleagues (2022) used objective health data to measure the effects of the home office on burnout and productivity and accompanied this with quantitative and qualitative data to gain a better understanding of the overall work experience. Dynamic contexts create high-intensity job demands (e.g., through conflicting tensions, role ambiguity or re-skilling and up-skilling demands) (see, for example, Harsch & Festing, 2020; Raisch et al., 2009; Rantanen et al., 2021; Salmen & Festing, 2022). Furthermore, some forms of NWW, such as on-demand work have been reported to be associated with poor wellbeing (Charalampous et al., 2019; Duggan et al.,

2020). Thus, in line with Bruch et al. (2022), it might be relevant to include perspectives from healthcare research to investigate the effects of further forms of NWW and dynamism on employees. As such, researchers could, for instance, assess health data such as blood pressure and heart rate variability to measure stress levels. Qualitative interviews can help explore the underlying reasons for stress, and on this basis, caring-oriented interventions can be implemented.

5.4.2 Theoretical reflections

Strengthen theoretical foundation. First, in line with several authors (Alfes et al., 2022; Ashford et al., 2018; Schermuly, 2020), it is noteworthy that the NWW research field still lacks a well-substantiated theoretical foundation, because existing theories that were developed under different premises might not be applicable to this new context. As Ashford et al. (2018) put it: "[…] our theories risk becoming far less practical as the world of work progressively changes around us" (p. 24) and as a consequence, novel theories might be required. Alfes et al. (2022) pinpoint different avenues through which theory development could be realised to create a better understanding of the phenomenon. Among them, two aspects are establishing further construct clarity and developing theoretical frameworks. This is also backed by Schermuly (2020), who posits that the term is used arbitrarily and that "this arbitrariness of terms is making practical and scientific work increasingly difficult" (p. 10)[6] As an answer to this issue, Hesselbarth et al. (2024) make a valuable contribution and explain the phenomenon from an open systems perspective. The current dissertation draws on these insights by Hesselbarth et al. (2024) and also looks at NWW as a vehicle to fit the requirements of the dynamic environment from an open systems perspective. While these considerations represent valuable starting points, more research is required to validate this theoretical perspective by testing the developed conceptual frameworks.

Investigate further supporting factors. Second, the manuscripts emphasise primarily the role of HRM in supporting employee characteristics, which are important in dynamic

[6] The original quote is in German and has been translated from German to English; original quote: „Zunehmend erschwert diese Begriffsbeliebigkeit die praktische und wissenschaftliche Arbeit" (Schermuly, 2020, p.10).

environments. Although the authors also identify further factors on the leader, individual and organisational levels in Manuscripts 2 and 3, this was not the main focus of this doctoral dissertation. However, the dynamic environment creates demanding working conditions that are high in intensity, as outlined above (e.g., Bakker et al., 2005; Raisch et al., 2009; Rantanen et al., 2021; Salmen & Festing, 2022). JD-R theory posits that these demands can be counterbalanced by job resources, avoiding not only negative outcomes, but leading also to favourable individual behaviours and attitudes (Bakker et al., 2005; Schaufeli, 2017). The theory indicates that in addition to HRM, further factors such as leaders, organisations and individuals are decisive (Schaufeli, 2017). This is also reflected in the current research in the related field of NWW; for instance, concerning work space and time, Günther et al. (2022) identify supervisors alongside HRM as being decisive for remote workers' wellbeing. Moreover, individual and team ambidexterity which have been suggested to support NWW have been shown to be fostered by paradoxical leadership (Zhang et al., 2022). Besides these leadership-related factors, individual characteristics have also been shown to be relevant in contexts of NWW. Exemplarily, here a paradox mindset can be mentioned, as it helps individuals not only cope with tensions that are inherent in dynamic contexts, but also to translate them into favourable outcomes, including innovative work behaviour (Liu et al., 2020). Next, new forms of allocation and organisation of work, including agile working, require self-responsibility by individuals (Hesselbarth et al., 2024), which is another example of an individual characteristic facilitating NWW. Finally, organisational factors have been shown to be of importance; instead of hierarchical structures, employees are increasingly navigating in more participative, agile structures in the new world of work (Alfes et al., 2022; Drazic & Schermuly, 2024; Harsch et al., 2016). Associated requirements, such as articulating ideas or experimenting with novel approaches, involve threats for individuals, as – in the case of failure or negative outcomes – they might be in a poor position (Newman et al., 2017). As a consequence, they might be reluctant to contribute (Newman et al., 2017). Establishing a psychological safe environment, where "employees feel safe to voice ideas, willingly seek feedback, provide honest feedback, collaborate, take risks and experiment" (Newman et al., 2017, p. 521), represents an avenue for avoiding adverse effects and helping employees to become co-players in organisations. It has been demonstrated that organisational support is important in relation to creating psychological safety (Newman et al., 2017).

Considering JD-R theory and findings in the NWW research field indicating that HRM is not the only crucial factor in successfully transforming the way people work, future researchers are encouraged to investigate joint associations of job resources on different levels with NWW-related outcomes. This could be pursued by broadening the conceptual models highlighted in the individual manuscripts and in this current work by further factors on the organisational, managerial or individual level and quantitatively testing them or by introducing completely novel research models considering multiple facilitating factors.

Research blue-collar contexts. Third, the two empirical contributions of this doctoral dissertation base their findings on samples dominated by white collar workers. Thus, blue collar workers are largely overlooked in both our sample and the related NWW research field (exceptions, for example, are studies on human machine interaction in the manufacturing context or some forms of gig work, such as Duggan et al., 2020; Hampel, 2023). Some researchers indicate that especially work of white collar workers has changed towards greater flexibility and dynamism in recent years (Drazic & Schermuly, 2024), which can provide a justification to study this cohort. However, NWW also exist for blue collar workers. For example, work for this cohort is increasingly organised in agile and participative manners (Stakenborg, 2023). Besides these aspects which already exist today, the cohort also demands for greater flexibilisation of work, as indicated in a study by Randstad (2023). Taking into account that blue collar workers are already a scarce resource in some sectors and countries (e.g., Germany lacks skilled workers in the semiconductor industry) (Köhne-Finster, 2023), as well as bus and truck drivers (German Parlament, 2022), it is essential to engage in retention-oriented activities that might improve their work experiences. Here for instance, more flexible approaches to work could contribute. All in all, future studies could consider also focusing on blue collar contexts when investigating topics around NWW. More precisely, they could shed light on specific approaches to work (e.g., flexible work or agile techniques). In this regard, it could be investigated how they can be implemented in a non-office context, what effects arise and which factors need to be in place to facilitate this type of working in such a context.

Examine non-Western contexts. Fourth, the empirical Manuscript 2 and partly Manuscript 3 take a Western-dominated perspective on HRM and employee characteristics in dynamic environments. This is also true for the related field of NWW, where studies are

mainly based on samples consisting of participants from Europe and/or the USA. This is in line with Hesselbarth et al. (2024), who also find poor geographical diversification of the study samples included in their SLR. A recent study on the impact of automation on jobs conducted in developing countries outlines that a high percentage of jobs might disappear (e.g., levels of automation risk in ten studied developing countries range between 66.0% and 49.6%) (Egana del Sol, 2020). This is one indicator that there is a strong need to investigate NWW in non-Western contexts. Moreover, future researchers might deal with the question as to what extent NWW is already implemented, what success factors and challenges exist and which outcomes can be expected.

Analyse the impact of workforce transformations. Fifth, the implementation of NWW runs alongside workforce transformations on a structural dimension (Drazic & Schermuly, 2024; Hesselbarth et al., 2024). This is reflected, for example, in greater age and cultural diversity among the workforce and greater virtual collaboration (Drazic & Schermuly, 2024; Hesselbarth et al., 2024). Taking these developments as a starting point, Drazic and Schermuly (2024) identify a "modern-work-is-young stereotype" (p. 59) indicating that NWW-related practices are rather associated with younger than with older employees. As to the best of our knowledge there is no further investigation into the relevant topic of stereotypes in NWW contexts. Thus, future studies could centre on unconscious bias effects. In this regard, the researcher could ask whether people from different cultural backgrounds are associated differently with NWW. Furthermore, future research can also investigate whether there are age- or culture-specific attitudes held by workers themselves in favour of or against NWW. In addition, by focusing on the aspect of increased virtual collaboration in the workplace, researchers could investigate whether more distant collaboration has an impact on NWW. Potential challenges of virtual communication include ineffective communication and weak coordination (Powell et al., 2006; Zimmermann, 2019), which could hamper the successful application of agile techniques that rely on high degrees of interaction and coordination. Thus, it could be particularly relevant to look at the phenomenon of agility in virtual teams.

The above offers some suggestions as to how existing limitations and research gaps can be addressed by future studies. Particularly in view of the large number of different

approaches in NWW (Hesselbarth et al., 2024), however, it does not claim to be exhaustive.

5.5 Practical implications

Being exposed to an increasingly dynamic environment, many organisations are forced to change their current ways of operating (Alfes et al., 2022; Hesselbarth et al., 2024; Schermuly, 2021). The insights of this doctoral dissertation are especially valuable for – but not limited to – organisations operating in the healthcare, IT, pharmacy, machinery, agricultural, electronics and chemistry sectors, all of which face strong dynamism (Dyer et al., 2014). This dissertation has provided not only an in-depth analysis of employee characteristics (i.e., individual agility, boundary spanning and ambidexterity) and the role of HRM in the three manuscripts, but also a further synthesis and analysis of the related NWW research field. As presented above, with regards to NWW, some organisations maintain the status quo and thus employ traditional ways of working. For this cohort, investigations provide an impetus to consider NWW as an option to face the dynamic environment. At the same time, some organisations have shaped their operating models in a move towards greater NWW. This cohort of organisations can learn how they further support and enable the successful implementation of NWW with the help of HRM and employee characteristics. Finally, this doctoral dissertation also derives important implications for HRM and individuals. Grounded in the insights of this doctoral dissertation, the current section presents lessons learned for organisations, HRM and individuals.

Organisational level. First, Manuscripts 1 and 3 indicate that dynamic contexts often entail paradoxes and ambiguities. Thus, organisations could consider communicating their goals, such as implementing specific forms of NWW, with the greatest possible clarity to HRM and employees. This would enable HRM to align practices and systems better. Moreover, employees would receive more valuable guidance in an environment dominated by constant motion and high degrees of individual autonomy and self-responsibility.

Second, this doctoral dissertation advises organisations to treat HRM as a strong element in contexts of dynamism and NWW. As detailed in the manuscripts, the development of employee characteristics relevant in a dynamic environment, and the

successful implementation of NWW, heavily depends on HRM; thus, it holds a powerful position, and this needs to be recognised by organisations.

HRM level. First, it is suggested that HRM practitioners evaluate whether current practices and systems fit the contextual factors to which organisations are exposed. For the specific context of dynamic environments, this dissertation has outlined that aligned practices and systems are of value. In this regard, flexibility-promoting HRM enabling employee agility, talent sharing allowing employee boundary spanning and ambidexterity-oriented HRM stimulating individual ambidexterity have been investigated in the three manuscripts.

Second, in terms of specific activities, it is important that HRM focuses on learning and development, i.e., a recurring theme in the manuscripts and the related field of NWW. Today, skills become outdated very quickly, and thus a strong focus should be placed on constant re-skilling and upskilling. This doctoral dissertation recommends that HR practitioners pursue practices and systems with an emphasis on constant skills development. More specifically, Manuscript 1 indicates a flexibility-promoting HR system, including recruiting and selection, training and development, performance management and rewards practices emphasising learning ability and continuous skills development, to yield favourable results such as employee agility. Moreover, Manuscript 2 reveals that talent sharing brings fresh insights and perspectives to employees and organisations through interorganisational exchange.

Third, it is proposed that HRM sets a clear focus on human beings. This is a key factor, as dynamic contexts can result in tensions and high job demands that increase stress and affect an individual's wellbeing, as outlined in Manuscripts 1 and 3. It is advised that HRM implements practices that help reduce or avoid these negative effects. These include, for instance, regular feedback sessions with HR and/or a supervisor, personal coaching and creating a wellbeing-oriented environment characterised by openness and trust. Moreover, HRM can not only support and enable the implementation of NWW, but it can also provide important job resources, such as offering training and development, enabling participation and autonomy and ensuring person-job fit, which in turn prevent the adverse effects of NWW and are also linked to beneficial individual outcomes (Schaufeli, 2017).

Fourth, two of the manuscripts especially highlight the key role of managers in dynamic contexts, either as multipliers for change or as those who care about their employees' wellbeing. HRM should thus reflect carefully on the individuals they select to take on leadership roles. In addition, HRM might need to establish guidelines that specify desired leadership behaviours and, based on these, provide training and development to this cohort.

Individual level. First, and picking up on what was previously discussed, this doctoral dissertation suggests that individuals invest in their knowledge and skills on an ongoing basis. For instance, Manuscript 1 shows the important role of learning agility in agile settings, and Manuscript 3 outlines that learning orientation is an important factor in managing paradoxical demands. Following on from these findings, individuals could consider showing self-responsibility. Vocational training or academic education only form the basis for employability and need to be enriched and updated by further learning on a continuous basis. In this regard, individuals can gain easy access to learning content, for example on social media platforms such as LinkedIn or YouTube (Bridgstock, 2019). Besides, networks within and outside organisations help deepen and broaden one's own knowledge (Gino et al., 2016). To engage in networking, many individuals need to improve their attitude to networking, initially by framing it as a learning source rather than as an obligation (Gino et al., 2016). As a second step, individuals could participate in specific events, become members of associations and connect with others via social media platforms within and beyond organisations. Besides self-responsibility in learning, individuals could also benefit from their employer's willingness to invest in learning. Thus, a wise selection of the employer based on this criterion is recommended. To do so, individuals can draw upon the employer brand and employer reviews on platforms such as kununu (in the German context) and Glassdoor.

Second, against the backdrop of high job demands in dynamic contexts, and their negative consequences for individual health and wellbeing, this research identifies personal characteristics as important balancing resources. The data hints once again at adaptability, fast and integrative thinking and learning orientation. Furthermore, the literature in this regard presents resilience, goal-setting, optimism and proactivity as important factors (Schaufeli, 2017). Knowing these characteristics, individuals can engage in directed self-

development activities that help them cope with positively the demands of the dynamic environment.

6 CONCLUSION

The current doctoral dissertation investigates the role of HRM for specific employee characteristics and broadened this via a further analysis of how this is related to NWW. In three manuscripts pursuing three different methodological approaches, it analyses the influence of HRM on individual agility, individual boundary spanning and individual ambidexterity. By investigating in-depth these individual characteristics, it contributes to advancing our knowledge on how to confront the dynamic environment. Moreover, the manuscripts contribute to construct clarity concerning employee agility and talent sharing, thereby creating foundations for further research in these areas. Moving beyond the individual contributions of the manuscripts, the dissertation also develops a framework covering the under-researched impact of HRM and employee characteristics on NWW. All in all, the author hopes that this work is of value to scholars and practitioners and helps them understand the value of HRM for employee characteristics and NWW in dynamic contexts.

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